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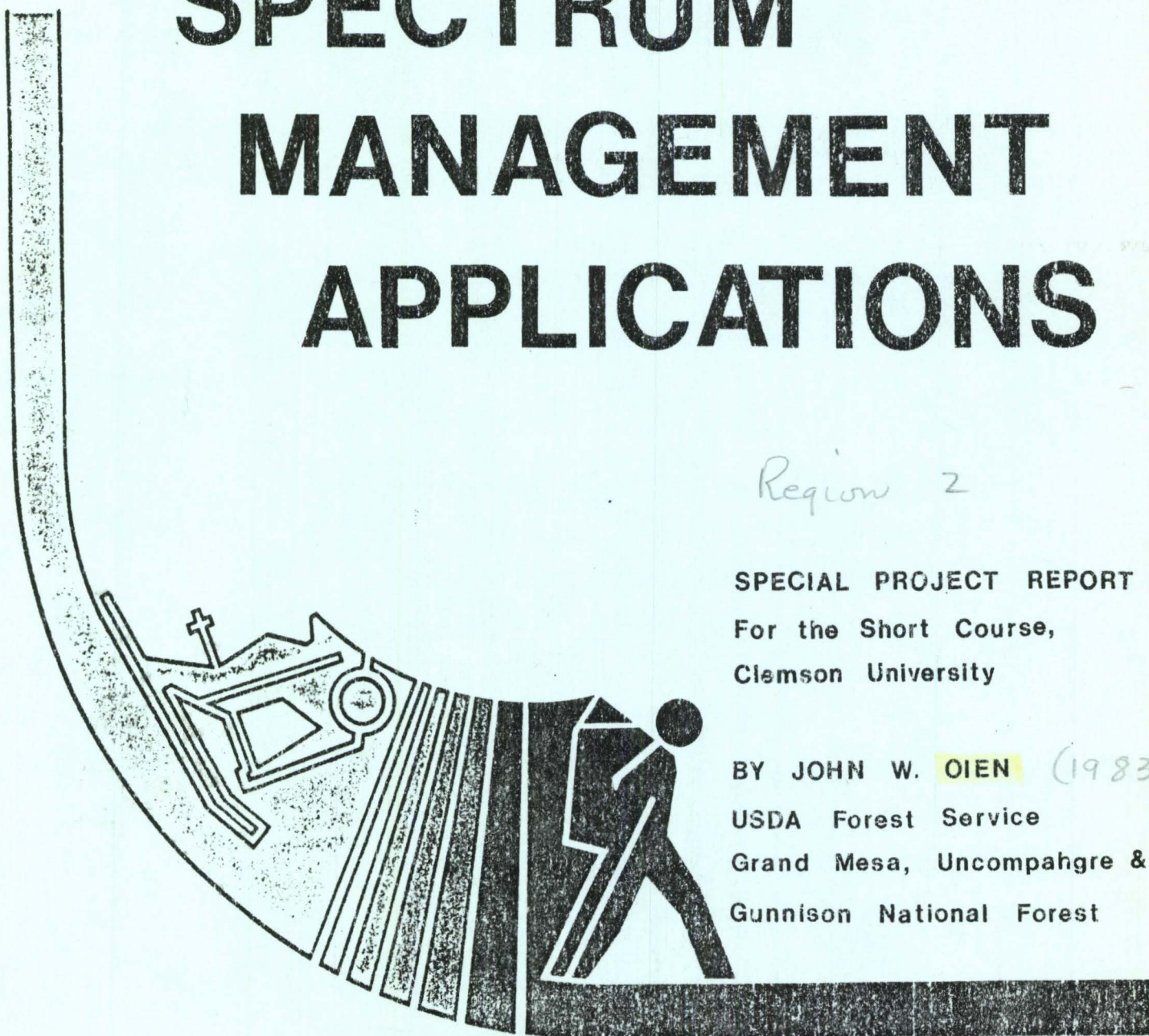
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RECREATION OPPORTUNITY SPECTRUM MANAGEMENT APPLICATIONS

Region 2

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For the Short Course,
Clemson University

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USDA Forest Service
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RECREATION OPPORTUNITY SPECTRUM (ROS)
MANAGEMENT APPLICATION ON THE GRAND MESA,
UNCOMPAHGRE AND GUNNISON NATIONAL FOREST

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ABSTRACT

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Title: Recreation Opportunity Spectrum (ROS)
Management Applications on the Grand Mesa,
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Abstract: Eighteen percent (18%) of the Grand Mesa, Uncompahgre and Gunnison National Forest is included as part or all of 8 congressionally designated Wilderness Areas. Seventeen percent (17%) of the area outside of the congressionally designated Wilderness Areas is inventoried as Primitive or Semi-Primitive Non-Motorized recreation opportunity spectrum setting. Making a total of thirty five percent (35%) of the Forest that is inventoried as Primitive or Semi-Primitive Non-Motorized recreation opportunity spectrum setting. Furthermore forty-two percent (42%) of the Forest is classified as Semi-Primitive Motorized recreation opportunity spectrum setting.

The Recreation Opportunity Spectrum (ROS) is a framework for managing a range of physical and social setting to provide a variety of recreation opportunities. The concepts of Recreation Opportunity Spectrum have been used in the Rocky Mountain Region "Regional Guides" and the Grand Mesa, Uncompahgre and Gunnison National forest "Plan". In general these efforts have helped us to know the current range of settings and to a degree the range of settings for which we want to manage, but they do not tell us how to manage or keep the desired range of settings. Without managing to maintain the Primitive, Semi-Primitive Non-Motorized and Semi-Primitive Motorized class settings, a danger exists for their loss due to management activities. A system or method is needed to insure that these Recreation Opportunity Spectrum classes are not arbitrarily lost.

A method is proposed and tested using three case studies. The method utilizes a check list to analyze project impact on the recreation opportunity spectrum settings and identify changes in recreation opportunity spectrum settings.

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I. INTRODUCTION

A. BACKGROUND

Forest managers in the past have managed for developed recreation facilities and activities. This has sometimes eliminated or displaced some desired recreation opportunities. Today's forest managers are beginning to recognize a need to manage for recreation opportunities based on environmental and social settings. This paper will explore some applications of managing for recreation opportunities. The background, statement of problem, purpose and delimitations, and objectives of this paper are discussed in this chapter.

In 1979 Clark and Stankey stated "When considering outdoor recreation opportunities, people must make choices about the type of settings in which to recreate, the sorts of activities in which to engage, and the kinds of recreation experiences to seek." Several years later this concept was applied to recreation management and incorporated into the draft copy of "Recreation Input to Land and Resource Management Planning" (1980) and the "Recreation Opportunity Spectrum Users Guide" (1981). The concept as applied to recreation land managers is that they provide the settings from which the recreationists has to chose. The Recreation Opportunity Spectrum Users Guide stated it this way: "While the goal of the recreationist is to obtain satisfying experiences, the goal of the recreation resource manager becomes one of providing the opportunities for obtaining these experiences. By managing the natural resource settings, and the activities which occur within it, the manager is providing the opportunities for recreation experiences to take place."

In order to maximize opportunities for recreation experiences the recreation manager needs to provide a variety of environmental settings and a diverse set of opportunities. In 1977 Stankey (1977) points out, "the basic premise of the recreation spectrum concept is that a variety of environmental settings 'from the paved to the primeval' (29) are needed to fulfill the many needs, motivations, and preferences that lead people to participate in outdoor recreation." In 1979 Clark and Stankey (1979) added, "the basic rationale underlying the Outdoor Recreation Opportunity Spectrum is that quality in outdoor recreation is best assured through provision of a diverse set of opportunities. A wide range of tastes and preferences for recreation opportunities exist among the public."

In advertent changes in a setting can result in a setting inconsistency and the loss of opportunities. In 1979 Clark and Stankey (1979) stated, "this process of 'invasion and succession' (Clark et al. 1971) can drastically change the nature of the available opportunities, the clientele served, and their recreational experiences. Particularly where the process is unnoticed, opportunities can be lost and clientele disfranchised."

B. STATEMENT OF THE PROBLEM

The Forest direction for managing the Recreation Opportunity Spectrum (ROS) is incomplete, nebulous and unclear. Thus it is difficult to make use of it in the day to day decision making process. The problem is further defined in the following three specific statements of the problem.

1. The rationale for Recreation Opportunity Spectrum (ROS) management direction as stated in the Rocky Mountain Regional Guide is not fully explained to provide understanding and support by all land management disciplines or line management.

Regional recreation goal number 11 and 12 in the Rocky Mountain Guide are: "11. Maintain the current ratios (plus or minus 10 percent) of Primitive and Semi-Primitive (both Motorized and Non-Motorized) ROS acreage in the Region. 12. Provide for increased motorized recreation in roaded natural and rural ROS areas."

Without an understanding of the reasons for the establishment of these goals it is difficult to compare the importance of a recreation experience which includes both physical and social attributes with other resource outputs such as timber with its strictly physical attributes (Thousand board feet of lumber).

2. Recreation Opportunity Spectrum management in the Grand Mesa, Uncompahgre and Gunnison Forest Land and Resource Management Plan is incomplete. Some prescriptions do not apply recreation opportunity spectrum class designation as part of their management direction while others only apply a seasonal recreation opportunity spectrum class designation as part of their management direction.

It is difficult to use the recreation opportunity spectrum concepts in managing an area when the direction as to what recreation opportunity spectrum class to manage for is lacking or nebulous. Recreation opportunity spectrum then becomes just an inventory of the present situation or at best a tool for recreation managers and not multiple use management. For example management area 10E, Emphasis is on municipal watersheds, and does not address ROS direction.

3. Recreation Opportunity Spectrum management in the Grand Mesa, Uncompahgre and Gunnison National Forest Land and Resource Management Plan is nebulous. Some prescriptions apply a range of 2 or 3 ROS classes part of their management direction. It is difficult to use ROS concepts in managing an area when its prescription allows for a range of 3 different ROS classes. For example management area 7E, Emphasis is on wood-fiber production and utilization, and allows for ROS direction to be Roaded Natural, Semi-Primitive Non-Motorized or Semi-Primitive Motorized.

C. PURPOSE AND DELIMITATIONS

The purpose of this paper is to incorporate recreation management as part of multiple use management and to facilitate implementing Forest Land and Resource Management Plan Direction. The intended readers are District Rangers, Forest Supervisors, Transportation Planners and recreation managers. The problem statement and examples apply directly to the Grand Mesa, Uncompahgre and Gunnison National Forests, However a review of other Region 2 Forest Land and Resource Management Plans indicates that some of the same problems exist on other Forests and that the concept can be adopted and applied to other areas.

It is not the intent of this paper to analyze the economics of a specific ROS class on a project or to review ROS as it applies to Land Management Planning. Emphasis will be made to highlight discussion of ROS in a multiple use sense and not on its economic consequence.

D. OBJECTIVES

1. To describe management applications using the Recreation Opportunity Spectrum.
2. To develop Forest Land and Resource Management Plan implementation guidelines for using the Recreation Opportunity Spectrum in management.
3. Relate these applications and guidelines to specific examples on the Grand Mesa, Uncompahgre and Gunnison National Forests.

II. LITERATURE REVIEW

The Recreation Opportunity Spectrum (ROS) has been around for 9 years. In this chapter, a review is made of its origin, concept, settings, concerns and management application.

It is the policy of the Forest Service (FSM 2303.2) to provide for a variety of appropriate opportunities for outdoor recreation and the goal of recreation management to provide a diverse spectrum of recreation opportunities. In 1982 Bryan (1982) wrote, "the manager is sensitized to the fact that each resource has a variety of uses, and good management implies providing a range of experiences for different recreationists." In the report for implementation of Section 6 of the National Forest Management Act of 1976 (NFMA), the Committee of Scientists recognized that: "Managing for recreation requires different kinds of data and management concepts than other activities. While recreation must have a physical base of land or water, the product -- recreation experience -- is a personal and social phenomenon. Although the management is resource based, the actual recreational activities are a result of people, their perceptions, wants and behavior."

A. ROS ORIGIN

The concept of a recreation spectrum or continuum has existed in some form since the early 1930's. Clark and Stankey (1979) stated that, "Many authors have remarked that a range or continuum of opportunity is needed to efficiently serve diverse public tastes for recreation." Robert Marshall used it in 1933 in a report for Congress entitled "The Forest for Recreation, a National Plan for American Forestry." In this report he identifies the undeveloped end of the spectrum and a need for wilderness. The Outdoor Recreation Resource Review Commission (ORRRC) (1962) used the concept in its recommendations to classify the recreation resource along "a spectrum from areas suitable for high-density use to sparsely used extensive primitive areas." Later in the early 1960's the U.S. Forest Service in its Recreation Manual Section 2310, used the terms "Development Scale", "Development Level" and "Experience Level". These terms were used to identify a spectrum of campgrounds with a range of development from those that provide for considerable modification from natural condition to those where the only development was for basic sanitation and fire protection. Wagar (1966) called for "campgrounds ranging from highly developed sites suitable for modern self-contained campers to remote locations accessible only to backpackers." But it wasn't until 1973 and again in 1982 when Nash (1982) wrote "A possible solution to the problem is the conception of a spectrum of conditions or environments ranging from the purely wild on the one end to the purely civilized on the other -- from the primeval to the paved," the idea evolved into a framework for planning, management and research.

In 1976 the National Forest Management Act in draft regulations called for "a broad spectrum of dispersed and developed recreation opportunities." At the same time a paper was being written by Brown, Driver and McConnell (1978) which identified criteria for development of an ROS system. This criteria included:

- "1. It should have intuitive appeal to managers and give relevant and useful results.
2. It should be adaptable to the land planning and management processes (or models) being used by different agencies.
3. It should give consistent results when replicated in the same area by different people.
4. It should provide objective criteria for evaluating the recreation opportunity potential of different types of resources or landscapes.
5. It should assure that the total range of OR opportunities are covered.
6. It should not be overly complex and expensive to implement.
7. It should be based on tested social and behavioral science theories that are relevant to OR choice. OR opportunities must be defined in human as well as physical resource terms simply because of the nature of the demand for those services.
8. It should build on existing systems, if possible."

From 1977 to 1980 the Forest Service worked on and developed a recreation opportunity planning process as part of the Forest Land and Resource Management Planning process as directed by NFMA. A users guide for this process was published in 1981.

B. ROS CONCEPTS

Richard Kraus (1971) defines recreation as, "activities or experiences carried on within leisure, usually chosen voluntarily by the participant, either because of the satisfaction or pleasure he gains from them or because he perceives certain personal or social values to be derived from them." Historically, the word recreation comes from the Latin word recreation which means that act of restoring or refreshing to health. A behavior which provides a sense of satisfaction or pleasure can be viewed as a satisfactory experience.

The ROS Users Guide (1981) adds, "the recreationist attains these satisfactory experiences by participating in preferred recreation activities in preferred surroundings or settings. Therefore, although the recreation resource manager manages settings, he or she does so to provide opportunities for recreation experience and the benefits those experiences produce for individuals and society." Webster defines opportunity as "a combination of circumstances, time and place suitable or favorable for a particular activity or action."

Driver and Brown (1978) proposed several behavioral science parameters for defining and managing recreation opportunities. The first parameter is a demand hierarchy which separates demand into four levels. These four levels are defined in terms of specific types of opportunities.

- "Level 1 - Demands for recreation activity
- Level 2 - Demands for opportunities to experience settings that characterize quality of preferred recreation environments
- Level 3 - Demands for opportunities to realize specific psychological outcomes (activity and setting tied together)
- Level 4 - Demands for opportunity to realize the benefits that flow from the satisfying experiences (enhanced, improved, subsequent performance)."

In the past forest managers have managed at Level 1 (recreation activities) of the hierarchy. They are now beginning to recognize and manage at Level 3 (recreation activities and environmental setting tied together) of the hierarchy. Arneson (1982) adds "the activity approach to recreation management does not differentiate between the psychological output desired, i.e., canoeing on a placid lake versus canoeing on a white water river. The ROS is a classification system that incorporates both the idea of activity and experience opportunity."

Quality in outdoor recreation is then dependent on the recreationists' motivation and his or her desire for a specific activity and environmental setting. Wagar (1966) points out, "Quality seems to be a highly personalized matter." Clark and Stankey (1979) add, "Providing a wide range of settings, varying level of development, access, and so forth insures that the broadest segment of the public will find quality recreational experiences, both now and in the future." Quality in outdoor recreation is then best assured by providing a diverse set of activity and environmental opportunities.

C. ROS SETTINGS

The ROS system includes an inventory process that identifies the supply of recreation opportunities available on land and water areas. This inventory is made by analyzing the physical, social and managerial attributes of land and water areas. The ROS Users Guide (1981) adds, "the characteristics of each of these three components of the setting affect the kind of experience the recreationist most probably realizes from using the area."

The physical attributes (physical setting) describe an environmental spectrum with absence or presence of human modifications. At the primeval pole of the spectrum the landscape is vast, unmodified, and affected primarily by the forces of nature. It is a wilderness and a place for wild beasts. At the civilized pole the landscape is dominated by heavy site modification, mechanized equipment, synthetic materials and paved surfaces. It is a place planned and developed with many creature comforts for humans.

The social attributes (social setting) describe a spectrum of social interaction between individuals, groups and their use of the physical environment. As the ROS Users Guide (1981) states, "the social setting reflects the amount and type of contact between individuals or groups. It indicates opportunities for solitude, for interactions with selected individuals, or for large group interactions." At the primeval pole of the spectrum the social interaction is select and seldom. At the civilized pole the social interaction is scheduled, organized and constant.

The managerial attributes (managerial setting) provide an indication of the amount of regimentation and controls that have been established for an area. It indicates opportunities for absence or presence of regulations, rules, laws and type of development (site design). We generally have more regimentation rules and regulations when we are living in an inter-city apartment than when we are camping in an undeveloped area. The inter-city apartment may specify the number of occupants, location and number of parking spaces, limitations on pets, and limitation on sounds. Many urban subdivisions have covenants limit the type of structures, construction materials, and the number of pets or animals, etc.

Clark and Stankey (1979) note, "One important issue that must be considered when specific opportunity settings are being developed is the avoidance of inconsistencies." The ROS Users Guide (1981) adds, a setting inconsistency occurs when "the physical, social, and/or managerial settings are not the same on the same piece of ground." Arneson (1982) points out, "Changes in settings from other factors need to be recognized too. This includes changes due to other resource activities as well as natural changes such as timber growth, geologic erosion, etc." These need to be recognized so that recreation opportunities are consistent with the multiple use goals.

Seasonal changes in travel restrictions or accessibility and evidence of humans caused by climatic conditions can make changes in activities, setting, and experience opportunities. Seasonal variation may be important where winter big game range needs protection, while the big game are present only for one season, or where climatic conditions such as snow change physical setting.

To make the ROS concept operational, the spectrum has been divided into six broad classes (Table 1) of recreation opportunity. The ROS Users Guide (1981) adds, "Each class is defined in terms of its combination of activity, setting, and experience opportunities."

TABLE 1. ROS Classes

Recreation Opportunity Spectrum					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban

D. ROS CONCERNS

The first ROS concern is that its use is not simple. Clark (1982) states, "although the basic premise of the ROS is easy to understand, the interaction it implies are complex and not yet defined." Clark (1982) continues, "the ROS cannot be viewed as a prescriptive "cookbook" with a precise set of rules or hard and fast numerical standards or co-efficients. It is a flexible framework to help make judgements."

A second ROS concern raised by Clark, is that it does not have a set number of classes with specific names. Management need should indicate the number of classes with specific names that are desirable. The Forest Service has generally used six classes, however Region Six has added one to the middle of the spectrum (Roaded Modified), and Region Two in its regional prescriptions has expanded the primeval pole of the spectrum within designated wilderness areas (Pristine and Semi-primitive High Density).

E. ROS MANAGEMENT APPLICATION

The ROS system offers a framework within which a manager can vary setting attributes (access, facilities, social contact, etc.) to produce different recreation opportunity settings. Clark and Stankey (1979) have identified six setting factors that define the recreation opportunity spectrum and have management applications and significance. They are:

1. Access or movement into and within an area. This includes the ease or difficulty associated with movement, the type of access (roads, trails, or cross-country) and the permitted means of conveyance used (cars, trail bikes, all terrain vehicles, horses, feet). Managers can then control and vary the ease of movement by specifying access location relative to natural features, specifying access design and maintenance standards, and regulating acceptable means of conveyance.
2. Influence of non-recreational resource uses (logging, grazing, mining, etc.) in an area. This factor considers the extent to which non-recreational resource uses are compatible with various recreation experience opportunities.
3. On-Site Modifications in an area. This includes the extent of modification in an area, apparent degree the modification is blended into the natural setting of an area, the complexity of the modification and the degree facilities are developed for creature comforts and enjoyment or safety of users.
4. Social interaction involves the level of individual and intergroup contact, and space associated with different opportunities. Clark and Stankey (1979) point out, "the number of people in an area, how they are distributed in space and time, and the probability of interaction between parties are important elements in determining the appropriate social carrying capacities at different points along the opportunity spectrum.
5. Level of visitor impacts in an area. Clark and Stankey (1979) describe this factor as, "Human use of resources inevitably results in impacts, and recreation is no exception. These impacts might be on resources (trampling of vegetation or polluting of water) or on other people (noise, depreciative behaviors, inappropriate activities). Any use creates some impact; thus, the relevant question for managers is not "how can impacts be prevented" but "what level of impact is consistent with the type of opportunity being supplied.

Frissell (1978) developed a classification system to inventory and monitor campsite impacts with suggested management action. Frissell condition classes management direction is given in the Forest Land and Resource Management Plan. Frissell's campsite condition classes, visible indicators, and possible management actions are displayed in Appendix B.

6. Level of Regimentation in an area involves the nature, extent, and level of control over recreation use exercised by management. Clark and Stankey (1979) add, "A continuum of controls can be described, ranging from subtle techniques--such as site design and providing visitors with information to fairly heavy-handed measures that are authoritarian and perhaps accompanied by legal sanction."

F. LIMITS OF ACCEPTABLE CHANGE

The concept of limits of acceptable change (LAC) is a means of identifying and managing user impacts and modification from the primeval landscape. It was developed as a wilderness management concept, but can be used for management of all ROS classes. Haas (1981) defined the limits of acceptable change for wilderness character." This concept was used by Region 6 to identify and manage user impacts throughout the Recreation Opportunity Spectrum (ROS classes, settings, and facilities matrix). This matrix shows pictures along with text which describe the appropriate physical, social, and managerial settings, along with access, means of conveyance management patterns, and facilities for each ROS class.

Haas said, "the limits of acceptable change (LAC) are implemented by selecting appropriate LAC indicators and specifying the limits of acceptable change. The wilderness manager may define what is acceptable and unacceptable for both the biophysical and social components. The purpose of selecting LAC indicators and setting standards is to aid in preservation of the wilderness resource or its uses approach, equal, or exceed such point, mitigating action will be taken."

In the case of ROS classes rather than wilderness the indicators should be replaced with ROS setting attributes. It is not as important to identify impacts on the primeval landscape as it is to identify changes from the managed ROS setting as defined by setting attributes. Change may even be positive instead of negative. The difficult job is then defining the midpoints of each ROS class as the standards to preserve each ROS class. Once the standards have been defined then the management job is one of creating positive changes, analyzing anticipated changes and monitoring.

Arneson (1982) notes, "Serious problems can develop from inadvertent changes. As the nature of a setting is altered, inconsistencies may occur, resulting in subsequent changes in use." Arneson (1982) adds, "the basic problem of an inconsistency is that it introduces the potential for triggering a chain of events that might alter the entire nature of the intended opportunity." Planned projects can be analyzed using the six setting factors (Clark and Stankey, 1979) and the anticipated outcome evaluated as appropriate or desirable.

Frissell (1978) developed a simple classification system to inventory and monitor campsite impacts. It can also be used to identify the level of acceptable campsite impacts for a given prescription. Frissell's condition classes and possible management action are displayed in Appendix B.

III. PROCEDURE

Management applications using Recreation Opportunity Spectrum (ROS) concepts are suggested in the previous chapter. This chapter will expand on those concepts as they relate to the Forest Land and Resource Management Plan as a data base, evaluating consequences of proposed management actions, and monitoring changes in ROS classes. A checklist has been developed to evaluate management activities to determine the effects on the ROS resource.

A. DATA FROM PLANS

Management direction for recreation management, is found in the 1985-2030 Resource Planning Act (RPA) Program, Rocky Mountain Regional (R-2) Guide, and the Forest Land and Resource Management Plan. These are the 3 levels of integrated planning required by law in the Forest and Rangeland Renewable Resource Planning Act of 1974. The RPA program is a national assessment that establishes national and regional goals and targets for developed and dispersed recreation use and trail construction - reconstruction. The Regional Guide links the RPA assessment with local Forest Plans. It establishes regional and Forest goals, targets and direction. The Forest Land and Resource Management Plan provides the local ROS inventories, General Forest Management Requirements, specific Management Prescriptions, management area allocation and implementation guide.

1. ROS INVENTORY

The land and water areas of the Forest are inventoried and mapped by ROS class to identify which areas are providing what kind of recreation opportunities. This information then serves as a base for Land and Resource management planning and allocation. It also can be used as a basis for evaluating the effect of proposed action on the recreation resource and monitoring changes in ROS class.

2. GENERAL FOREST MANAGEMENT REQUIREMENTS

These management requirements set the baseline condition that must be maintained throughout the Forest in carrying out the Forest Land and Resource Management Plan. They establish the environmental quality requirements, natural and depletable resource requirements, and mitigating measures that apply to all Forest areas. Direction to use the ROS classification for management areas and not to exceed established ROS People At One Time (PAOT) per acre capacity are made in the general forest management requirements. The management requirements are presented in three columns: Management Activities, General Direction Statements, and Standards and Guidelines.

Management Activities are work processes that are conducted to produce, enhance or maintain output levels, or to achieve administrative and environmental quality objectives. Two primary management activity groups are used for recreation. They are: 1. Management of developed recreation sites and 2. Dispersed recreation management.

General Direction statements specify the actions, measures, or treatments to be done or the condition expected to exist after the general direction is implemented.

Standards and Guidelines are quantifications of the acceptable limits within which the general direction is implemented. General Forest management requirements for recreation are displayed in Appendix D.

3. SPECIFIC MANAGEMENT PRESCRIPTION

The management prescription includes the management area direction applicable to specific land areas. All prescriptions are multiple use prescriptions, but each has a primary emphasis.

The ROS Users Guide (1981) describes a prescription as "closely integrated sets of specific management practices scheduled over the entire planning period or portions of the planning period. Most acres with a planning area have the inherent capability, to some degree, to provide recreation opportunities and experiences. Therefore management prescriptions for each management area should include consideration for recreation use."

Arneson (1982), adds "Some prescriptions emphasize a particular recreation opportunity where other resources are managed to compliment the recreation use. Other prescriptions are primarily for other resource outputs with recreation use a secondary consideration. But all will include some recreation direction."

While all the Grand Mesa, Uncompahgre and Gunnison National Forest's management prescriptions do include some recreation direction, they do not always identify specific ROS class direction. See problem statement 2 and 3 in Chapter I. These problems have been resolved by establishing some implementation guidelines for the Forest Plan.

The management requirements for the management prescriptions are presented in three columns: Management Activities, General Direction Statements, and Standards and Guideline.

Management Activities are work processes that are conducted to produce, enhance or maintain output levels, or to achieve administrative and environmental quality objectives. Two primary management activity groups are used for recreation. They are: 1. Management of developed recreation sites and 2. Dispersed recreation management.

General Direction statements specify the actions, measures, or treatments to be done or the condition expected to exist after the general direction is implemented.

Standards and Guidelines are quantifications of the acceptable limits within which the general direction is implemented. Some selected Management Prescriptions for recreation are displayed in Appendix E.

4. MANAGEMENT AREA ALLOCATION

The Forest was divided into capability areas by vegetation composition, landform and slope class in the Forest Plan. The plan then allocated one management prescription to each of these areas. Adjacent areas with common management prescriptions were then combined to create management areas. The management prescriptions give the direction to be applied to each of these management areas. The allocation is based on the capability of an area to produce different goods and services, the desired outputs and priorities for the entire Forest, and the relative cost of providing these outputs. In the planning process alternatives were developed using different mixes of management prescriptions which resulted in different resource emphasis and outputs. The Forest Plan includes a prescription map showing the prescription allocation.

5. IMPLEMENTATION GUIDE

The Forest developed implementation guide to help provide an orderly and efficient transition from current management direction to management under the approved Forest Plan. It includes goals, objectives, action plans, unit responsibility, and completion dates. It is divided into six topics:

(1) Operational Factors

These provide internal management and control. Operational factors set performance criteria and standards for specific units and types of projects. Proposed guidelines for ROS included as part of this topic are shown in Appendix H.

(2) Scheduling

This deals with annual, mid level, and long-range Land and Resource Management Planning, accomplishments, budgeting, and the Program Development and Budgeting (PD&B) process.

(3) Reporting and Data Management

The Forest will implement the Resource Information System (RIS) concurrent with implementing the Plan. The Resource Information System will be used for traditional resource data storage and retrieval and for accomplishment accounting.

(4) Amendments and Revisions

These provide direction for amending and revising the Plan.

(5) Monitoring

Monitoring requirements are displayed in the Forest Plan Chapter IV. This part of the implementation plan identifies unit responsibility, reporting, and accountability for monitoring.

(6) Research

Research needs are displayed in the Forest Plan Chapter III. This section of the implementation plan identifies unit responsibility and reporting requirements for research.

B. EVALUATING CONSEQUENCES OF FOREST PLAN MANAGEMENT ACTIONS

The Recreation Opportunity Spectrum concept are good tools for use in evaluating the consequences of management action on the recreation resource. It matters little whether the action is a recreation management project or other management activity or project. Both may have an effect on recreation opportunities. Thus it is a tool for the multiple use manager not just the recreation manager. There are at least three areas of analysis in which the ROS concepts can be used: 1. Projects with Environmental Assessment, 2. Projects without Environmental Assessment, and 3. Travel management planning.

1. PROJECTS WITH ENVIRONMENTAL ASSESSMENT

In the environmental analysis process for a project, these concepts can be used to describe the current situation and the effects of the project on recreation opportunities. The current situation can then be compared to anticipated changes as a result of the project. Clark and Stankey (1979) identified six setting factors that define the recreation opportunity spectrum and are useful in describing and quantifying the effects of a project or management activity on recreation opportunities. They are:

- (1) Access and Movement
- (2) Influence of Non-Recreational Resource Uses
- (3) On-Site Recreation Modifications
- (4) Social Interaction
- (5) Level of Visitor Impacts
- (6) Level of Regeneration

These setting factors can be described for a project and compared to ROS setting characterization and the Visual Absorption Capability (VAC) to determine if the resultant ROS class has changed. The ROS Users Guide (1981) describes the ROS setting characterization as shown in Table 2.

TABLE 2. ROS Setting Characterization
(describes the limits of acceptable change)

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is not permitted.	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted.	Area is characterized by predominantly natural-appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.	Area is characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available.	Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans, on-site, are predominant. Large numbers of users can be expected, both on-site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

* This table is for descriptive purposes only

The six setting factors help quantify the effects of a project, but they do not describe the ability of the landscape to absorb impacts without being noticed. Eighty-seven percent of what we perceive is through our eyes (visually). The Forest Service Manual 2383.21 defines visual absorption capability (VAC) as: "an estimate of the relative ability of a landscape to accept management manipulations without significantly affecting its visual character. It is a measure of the relative capability of the land to absorb visual change."

The value of the visual absorption capability assessment is that different landscapes have different abilities to absorb impacts and still remain natural appearing or predominately natural appearing.

The VAC uses such factors as: slope, landscape diversity, vegetative screening, vegetative regeneration potential, and soil color contrast as a basis to come up with an absorption rating of high, intermediate or low. The method for determining VAC is displayed in Appendix C. This can then be used subjectively to help analyze if an impact is significant enough to result in an ROS class change.

The proposed implementation guide for the Forest Plan requires that all EA's include current ROS classification, expected ROS classification during a project and expected ROS classification after the project is complete.

In order to make consistent and systematic judgements on changes in ROS class, a process is needed. The following ROS class analysis checklist was developed as the first step of this process. Table 3 shows the ROS analysis checklist. The checklist records existing ROS acres, and resultant ROS acres. It also includes a series of yes and no questions about changes on the six setting factors, which can be used to describe the effect of the project and to identify needed mitigation.

Once the checklist has been filled out including the remarks column, the current situation, the affected environment and proposed mitigation measures can be written for the Environmental Assessment. It can also be used along with a map to summarize any changes that may have occurred which need monitoring.

TABLE 3.

ROS CLASS ANALYSIS CHECKLIST

A. Project

Name _____

Location _____

B. Existing ROS Class Acres (From current inventory).

Primitive _____

Semi-Primitive Non-Motorized _____

Semi-Primitive Motorized _____

Roaded Natural _____

Rural _____

Urban _____

C. Visual Absorption Capability Acres (From current inventory).

Low _____

Intermediate _____

High _____

D. Resultant ROS Class Acres (Including both short and long term).

Primitive _____

Semi-Primitive Non-Motorized _____

Semi-Primitive Motorized _____

Roaded Natural _____

Rural _____

Urban _____

TABLE 3. Continued - E. Opportunity Setting Factors

	Yes	No	Remarks (How and to what extent):
1. Access			
a.			Will the type of access change (i.e. primitive jeep trails suitable for four-wheel drive vehicles to single or double lane temporary or specified roads suitable for passenger cars. Road closure or obliteration)?
b.			Will the means of conveyance change (foot, horseback, four-wheel drive vehicle, high clearance vehicle, or passenger car, etc.)?
c.			Will natural physical barriers which limit access be changed (steep or rocky terrain, vegetation, or rivers, etc.)?
2. Non-Recreational Resource Use			
a.			Will the scope or extent (localized or widespread) of project change for the long-range time period?
b.			Will the scale or magnitude (size of impact) of the project change for the long-range time period?
3. Recreation Resource Use			
a.			Will changes in recreation use be caused by the project that creates a need for additional facilities (trails, trailheads, barriers, toilets, etc.)?
b.			Will the development scale for proposed developed recreation sites change?
c.			Are developed or proposed recreation site development scales compatible with the management areas ROS class?

TABLE 3. Continued - E. Opportunity Setting Factors

	Yes	No	Remarks (How and to what extent):
4. Social Interaction			
a. Will recreation user densities change with the project as a result of a change in access or user interest in the area?			
b. Will recreation user intergroup contact (number of contacts) change with the project?			
c. Will recreation user conflicts increase or decrease with the project?			
5. Level of Visitor Impact			
a. Will the project increase or decrease the amount of wildlife harassment caused by visitors in the area?			
b. Will the project change the Frissell class rating on a campsite within the area?			
c. Will the project change the water quality appearance (visual, turbidity, coliform, etc.)?			
d. Will the project change the air quality?			
6. Level of Regimentation			
a. Will the project change the need for road or area vehicle closures?			
b. Will the project create a need for management regulations (No rock collecting, limited length of recreation stay, horse use prohibited, No firewood collecting, etc.)?			

2. PROJECT ANALYSIS WITHOUT ENVIRONMENTAL ASSESSMENT

Under the Forest Plan implementation guide not all projects will require a written Environmental Assessment. Some projects or actions with no significant effect on the human environment can use a categorical exclusion. Some projects or actions with no significant impact may use a combined Environmental Assessment, decision notice and finding of no significant impact. However, even though no Environmental Assessment is required for these projects, analysis is needed to determine what the effect of the project will be on the environment.

In order to make such an analysis the ROS class analysis checklist should be completed and kept in the project files. If no significant effects or impacts are found no further work would need to be done. If significant effects or impacts are found then the process discussed for Projects with Environmental Assessment would apply.

3. TRAVEL MANAGEMENT PLANNING

Travel management planning includes two categories. They are: 1. large project analysis and 2. regulation restrictions.

Some large projects require considerable transportation planning as part of the project analysis. However, because of the consequence of the transportation plan it is best scheduled prior to the environmental analysis process. In these cases an analysis of ROS class should be made for the transportation plan and updated to include all effects of the project when the Environmental Assessment for the project is made. The same ROS class checklist and process as used for projects with Environmental Assessment should be used here.

Other travel management decisions such as road and area closures can change recreation opportunities. A Forest travel management criteria was established after the Draft environmental impact statement was made to designated travel restrictions. These restrictions did not include ROS class implication. A new travel management criteria needs to be developed which includes prescription travel management/transportation direction, prescription ROS class implication and direction and other subsequent prescription direction. This should become part of the Forest implementation guides. The old travel management criteria is shown in Appendix I.

C. MONITORING ROS CLASS CHANGES

The ROS classifications need to be monitored to verify that anticipated recreation opportunity outputs are produced and that changes do not exceed a plus or minus ten percent of primitive and semi-primitive ROS acreage.

How to monitor ROS settings and experiences has not been established. Existing data sources are not necessarily time, site or impact area specific. Summary of anticipated changes can be made from project ROS class analysis checklists, but completion of a checklist or Environmental Assessment is not synonymous with the change taking place. The change can be considered on the ground only when the attainment report has been made. Furthermore some changes are caused by impacts made by the recreationist or mineral operator and may not be fully controlled by management.

Three topics need to be included in monitoring change in ROS classification. They are: 1. Environmental assessment ROS summaries, 2. Accomplishment report RIS (Resource Information System), and 3. Recreation users or other impacts.

ROS Environmental assessment summaries identifying potential future change can be made from project ROS class analysis checklists. They should include critical environmental changes and limits of acceptable change. They should then be referenced to a project attainment report to verify that a change has taken place. Once the change has taken place it should be recorded in the resource information system data base.

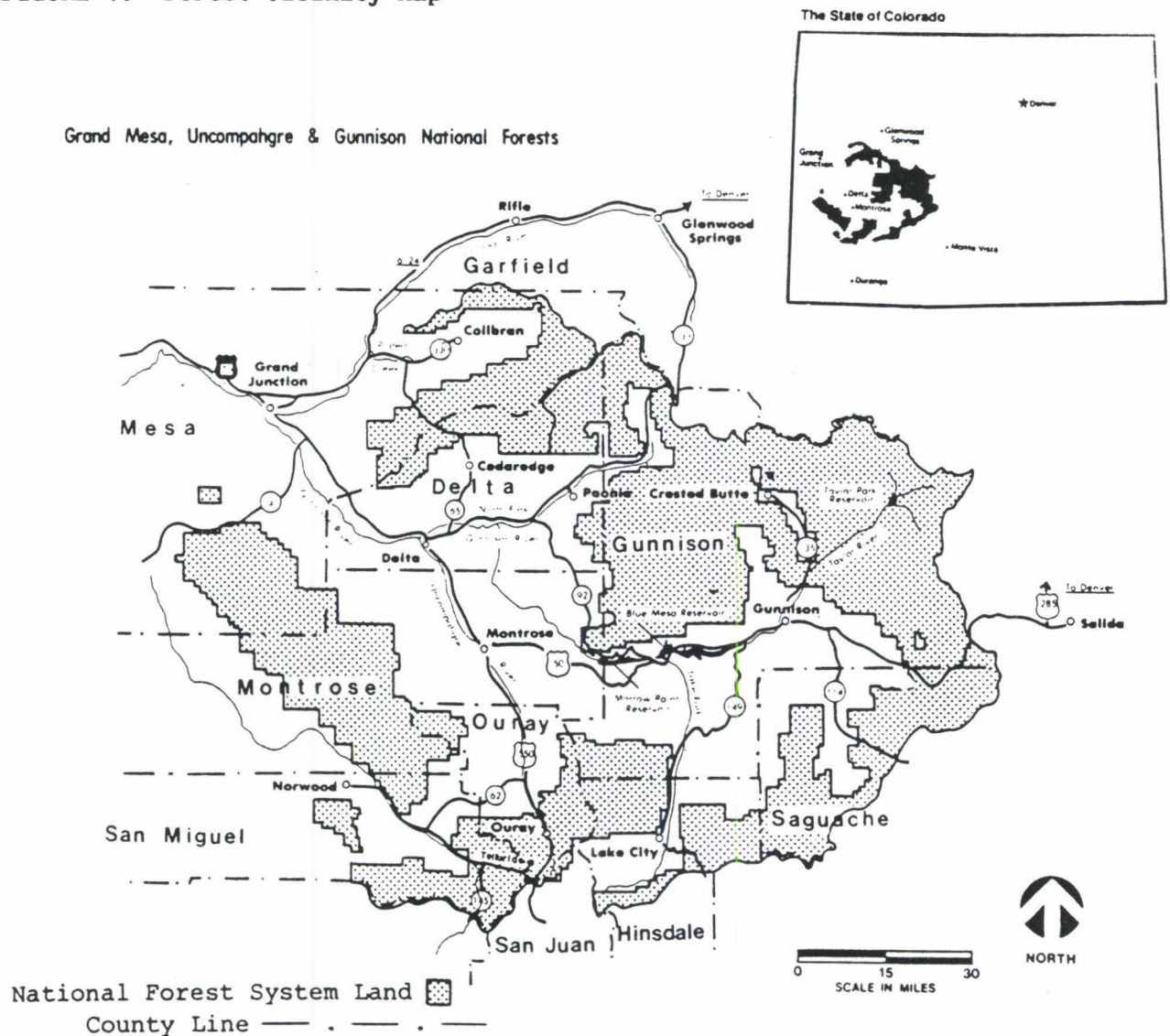
Recreation use or other impacts should be evaluated when identified for potential ROS change when access or physical impacts change.

IV. APPLICATIONS ON THE GRAND MESA, UNCOMPAGHRE AND GUNNISON NATIONAL FORESTS

The previous chapters developed proposals for implementing Recreation Opportunity Spectrum concepts in management actions. This chapter applies these concepts to specific examples on the Grand Mesa, Uncompahgre and Gunnison National Forests.

There are 2,953,186 acres of National Forest System land comprising the Grand Mesa (346,141 acres), Uncompahgre (944,241 acres) and Gunnison National Forests (1,662,804 acres). Figure 1 is a vicinity map displaying land administered by the Forest.

FIGURE 1. Forest Vicinity Map

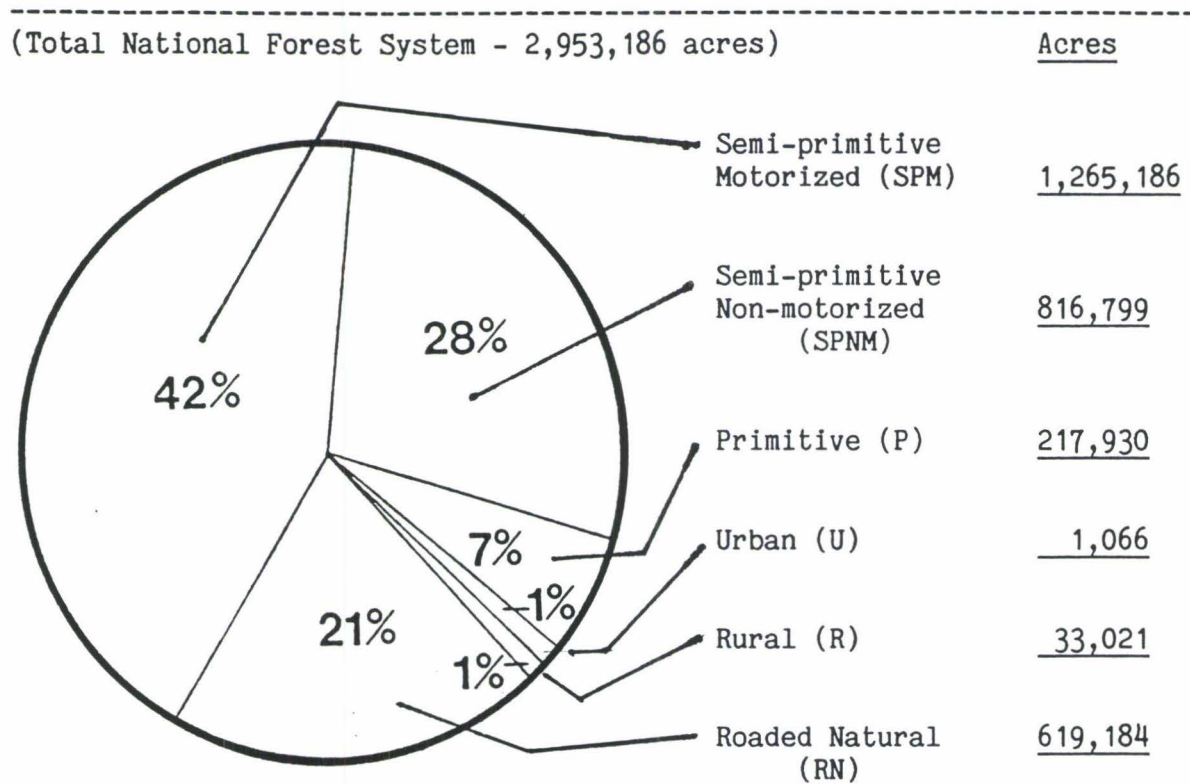


The Forest provides for a wide variety of recreation opportunities. Total dispersed recreation capacity is approximately 10.2 million RVD's annually. The Forest can supply 847,560 RVD's of semi-primitive non-motorized recreation use and 2,637,154 RVD's of semi-primitive motorized, roaded natural or rural recreation use each year. Dispersed recreation use for 1980 was 1.2 million RVD's. Total recreation use for 1980 was 2.2 million RVD's. The current dispersed recreation use by ROS class is displayed in Table 4. Current acres by ROS class are displayed in Figure 2. Current major recreation activities are displayed in Table 5.

TABLE 4. 1980 Recreation Use Summary.

ROS* Class	RVD's**
Urban, Rural and Roaded Natural	696,300
Semi-Primitive Motorized	492,900
Semi-Primitive Non-motorized	45,500
TOTAL	1,234,700
*ROS = Recreation Opportunity System **RVD's = Recreation Visitor Days.	

FIGURE 2. Current ROS* Distribution.



*ROS = Recreation Opportunity Spectrum

TABLE 5. Major Recreation Activities Summary for 1980.

Activity	Thousand Recreation Visitor Days	Percent
Camping	606	28
Auto Travel	345	16
Fishing	243	11
Downhill Skiing	189	8
Hunting	165	7
Resort and Recreation Resource	117	5
Hiking	105	5
Picnicing	72)	
Other Motorized Travel	60)	
Snowmobile	53)	
Gather Forest Products	41)	
Other Winter Sports	40)	20
Viewing Scenery	40)	
Horseback	34)	
Water Craft	28)	
Other Activities	61)	
TOTAL	2,199	100

In addition to 2.2 million recreation visitor days, annual outputs from these forests include: 28 million board feet of timber, 320 thousand animal unit months of domestic livestock grazing and 83 thousand deer and elk carrying capacity for winter range. Aspen management is becoming increasingly important as the Forest proposes to treat approximately 4,000 acres annually. Water production is also important as the Forest is the headwaters of three major tributaries of the Colorado River System. Mineral development is evident including oil and gas leases. Classified wilderness totals nearly 500,000 acres in 8 different units.

Following are some examples of ROS management applications on the Grand Mesa, Uncompahgre and Gunnison National Forests.

A. RED CANYON CASE STUDY AREA

The Red Canyon Case Study Area is located on the south end of the Uncompahgre Plateau on the Uncompahgre National Forest. It includes the drainage of Tabeguache Creek, Cottonwood Creek, Red Canyon, and Little Red Canyon. The area includes recreation opportunities for Roaded Natural (RN), Semi-Primitive Motorized (SPM) and Semi-Primitive Non-Motorized (SPNM) ROS experiences.

Existing recreation activities are Hunting, Fuelwood Gathering, Viewing Scenery, and Camping. Camping is associated with the Antone Springs and Iron Spring Campgrounds. These campgrounds are managed at less than standard service levels by older American employees, with use being low. Scenery is viewed from Highway 90 and the Divide Road. Hunting and fuelwood gathering take place through the area. The area on the lower bench of the Norwood District has lost its SPNM characteristics by creation of a jeep trail. The existing jeep trail was not located or designed but merely "appeared" with off-road use.

1. DATA FROM PLAN

The Forest Land and Resource Management Plan provides the existing ROS inventory, general forest management requirements, specific management prescriptions, management area allocations, and implementation guides.

Table 6 displays existing ROS areas, Ranger District locations, ROS setting, area acres, and annual capacity in recreation visitor days (RVD's) for the Red Canyon Case Study Area. Table 7 displays a summary of ROS classification and capacity for the Red Canyon Case Study Area. Figure 3 displays the current ROS inventory map for the Red Canyon Case Study Area. General Forest management requirements for recreation are displayed in Appendix D. specific management prescriptions for recreation in the Red Canyon Case Study Area are displayed in Appendix E. Figure 4 displays a map showing the prescriptions applied to management areas in the Red Canyon Case Study Area.

TABLE 6. ROS Inventory Data.

RANGER DISTRICT	ROS			
	Area No.	Setting	Acres	RVD's Capacity
Norwood	5	RN	5,725	25,403
Morwood	9	RN	8,400	25,044
Norwood	4	SPM	7,010	1,597
Norwood	6	SPM	15,555	3,660
Norwood	10	SPM	6,300	2,444
Norwood	7	SPNM	7,600	4,569
Norwood	8	SPNM	4,000	306
Ouray	2	RN	47,400	420,070
Ouray	8	SPM	4,250	3,738
Ouray	9	SPM	3,950	1,792
Ouray	10	SPNM	700	946
Ouray	11	SPNM	250	471
Ouray	13	SPNM	1,700	147
TOTAL			112,840	490,187

TABLE 7. ROS Classification Summary.

ROS Class	Acres	RVD's Capacity
RN	61,525	470,517
SPM	37,065	13,231
SPNM	14,250	6,439

FIGURE 3. ROS Map.

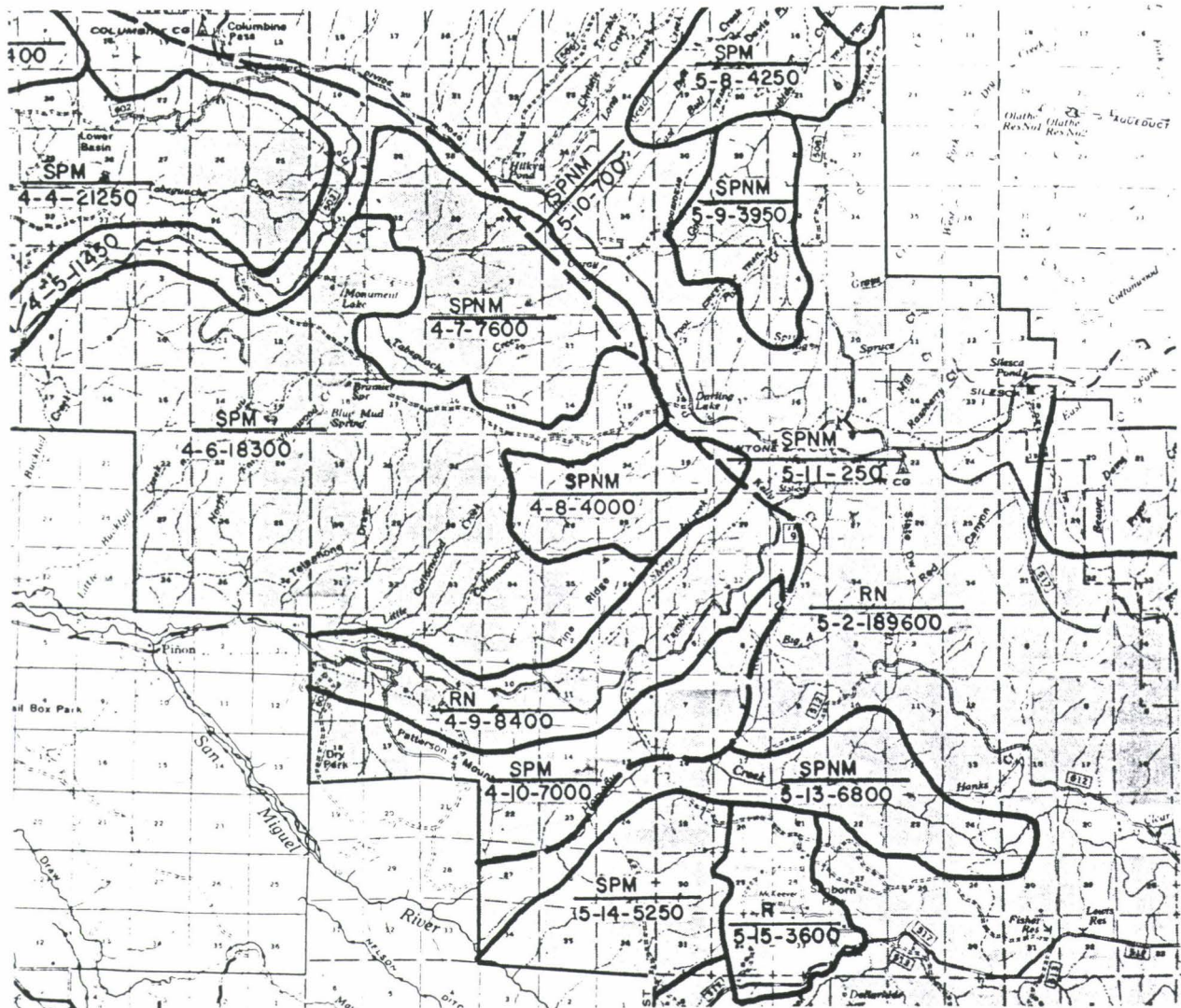
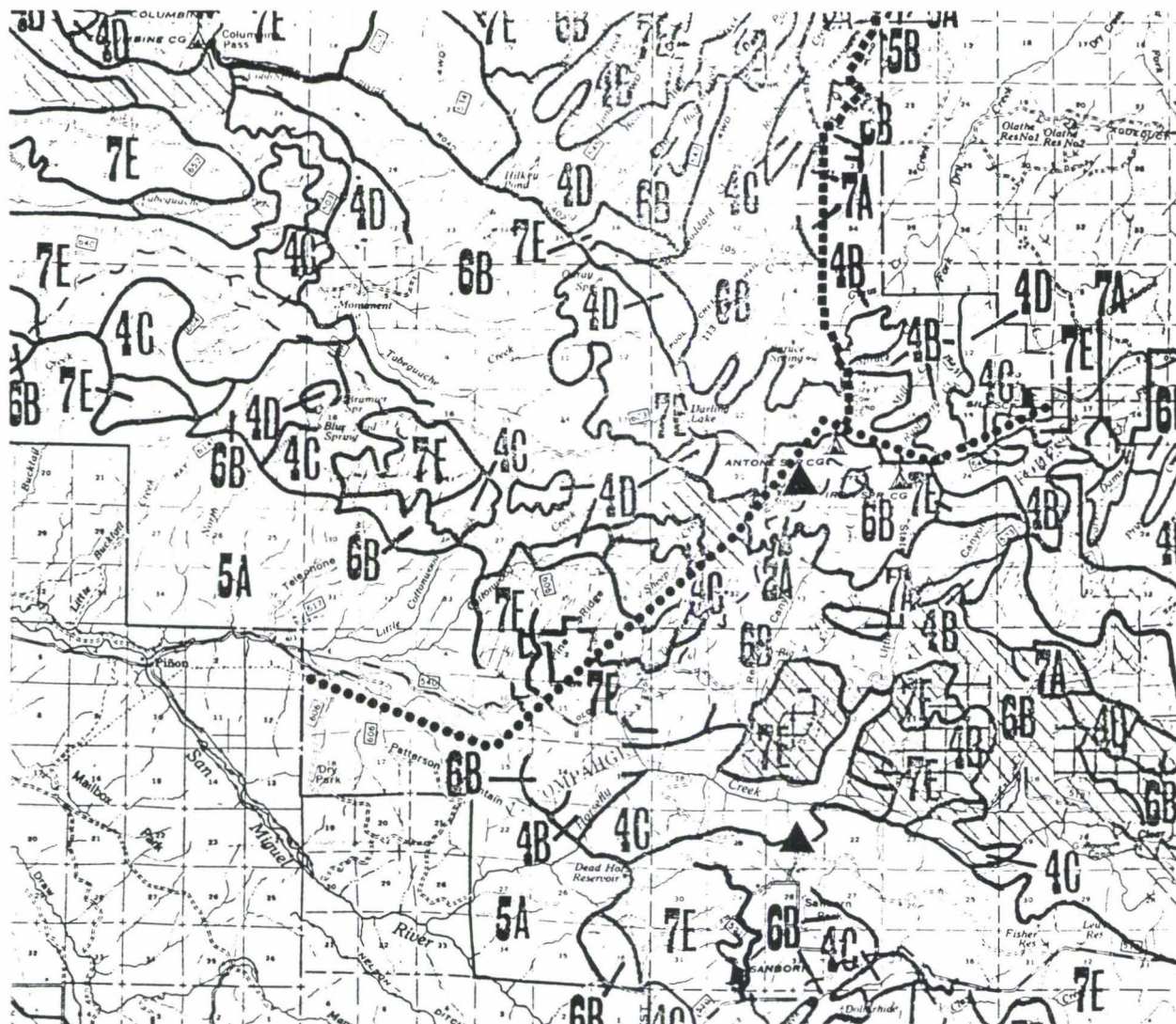


FIGURE 4. Prescription Allocation Map.



2. EVALUATING CONSEQUENCES OF MANAGEMENT ACTION

Two management actions are proposed for the Red Canyon case study area. They are: 1. Red Canyon Aspen Treatment and 2. Rifle to San Juan 345 KV transmission line construction. Examples of the ROS Class Analysis Checklist and environmental assessment document consequence summary for each project follow. Figure 5 displays the Red Canyon Aspen Treatment Area. Table 8 displays the ROS Class Analysis Checklist for the Red Canyon Aspen Treatment Area.

FIGURE 5. Red Canyon Aspen Treatment Area.

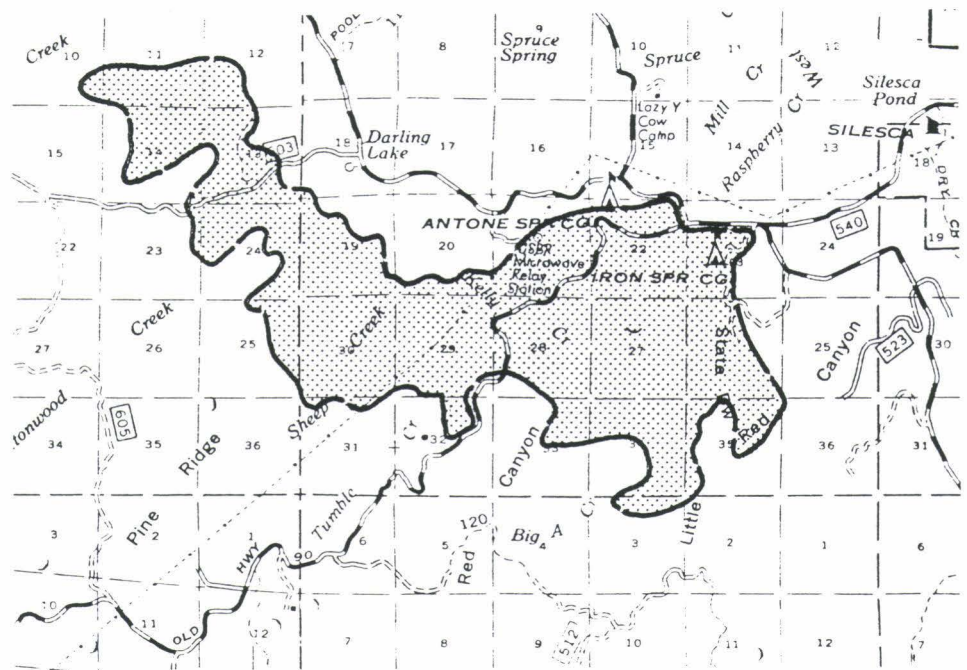


TABLE 8. Red Canyon Aspen Treatment

ROS CLASS ANALYSIS CHECKLIST

A. Project

Name Red Canyon Aspen Treatment

Location Uncompahgre Plateau

B. Existing ROS Class Acres (From current inventory).

Primitive 0

Semi-Primitive Non-Motorized 2,118

Semi-Primitive Motorized 748

Roaded Natural 4,573

Rural 0

Urban 0

C. Visual Absorption Capability Acres (From current inventory).

Low

Intermediate

High

D. Resultant ROS Class Acres (Including both short and long term).

Primitive 0

Semi-primitive Non-Motorized 2,118

Semi-Primitive Motorized 748

Roaded Natural 4,573

Rural 0

Urban 0

TABLE 8. Continued - E. Opportunity Setting Factors

		Yes	No	Remarks (How and to what extent):
1. Access				
a.	Will the type of access change (i.e. primitive jeep trails suitable for four-wheel drive vehicles to single or double lane temporary or specified roads suitable for passenger cars. Road closure or obliteration)?	X		Jeep trails have changed the SPNM opportunities shown on the inventory to SPM opportunity along the south facing slopes. The project would close these jeep trails and restore the SPNM opportunities. The terrain in the northwest corner may preclude restoring SPNM opportunities. 8.75 miles of temp. road are planned.
b.	Will the means of conveyance change (foot, horseback, four-wheel drive vehicle, high clearance vehicle, or passenger car, etc.)?	X		See remark a. Jeep use would be prohibited.
c.	Will natural physical barriers which limit access be changed (steep or rocky terrain, vegetation, or rivers, etc.)?	X		
2. Non-Recreational Resource Use				
a.	Will the scope or extent (localized or widespread) of project change for the long-range time period?	X		Treatment will be commercial Aspen harvest on 7,439 acres. Harvest method will be clear cut. Aspen sprouting and regeneration will make clear cuts a short-term impact.
b.	Will the scale or magnitude (size of impact) of the project change for the long-range time period?	X		The magnitude of specific treated areas will be limited to 40 acres.
3. Recreation Resource Use				
a.	Will changes in recreation use be caused by the project that creates a need for additional facilities (trails, trailheads, barriers, toilets, etc.)?	X		Mitigation of existing jeep use will restore some of the area to SPNM.
b.	Will the development scale for proposed developed recreation sites change?	X		
c.	Are developed or proposed recreation site development scales compatible with the management areas ROS class?			Antone Springs and Iron Campgrounds have a development scale of 3 and are located in a Roaded Natural setting.

TABLE 8. Continued - E. Opportunity Setting Factors

	Yes	No	Remarks (How and to what extent):
4. Social Interaction			
a. Will recreation user densities change with the project as a result of a change in access or user interest in the area?		X	Not likely. Primary use activity is hunting.
b. Will recreation user intergroup contact (number of contacts) change with the project?		X	Not likely.
c. Will recreation user conflicts increase or decrease with the project?	X		Some hunter vehicle use conflicts can be expected since easy access will be reduced.
5. Level of Visitor Impact			
a. Will the project increase or decrease the amount of wildlife harassment caused by visitors in the area?		X	
b. Will the project change the Frissell class rating on a campsite within the area?		X	
c. Will the project change the water quality appearance (visual, turbidity, coliform, etc.)?		X	
d. Will the project change the air quality?		X	
6. Level of Regimentation			
a. Will the project change the need for road or area vehicle closures?	X		Approximately 6 miles of Jeep trails would be closed and obliterated.
b. Will the project create need for management regulations (No rock collecting, limited length of recreation stay, horse use prohibited, No firewood collecting, etc.)?	X		See "a." above.

TABLE 9. Rifle to San Juan 345 KV Transmission Line

ROS CLASS ANALYSIS CHECKLIST

A. Project

Name Segment 18 - Rifle to San Juan 345 KV Transmission Line

Location Uncompahgre Plateau

B. Existing ROS Class Acres (From current inventory).

Primitive 0

Semi-Primitive Non-Motorized 0

Semi-Primitive Motorized 0

Roaded Natural 7,680

Rural 0

Urban 0

C. Visual Absorption Capability Acres (From current inventory).

Low

Intermediate

High

D. Resultant ROS Class Acres (Including both short and long term).

Primitive 0

Semi-Primitive Non-Motorized 0

Semi-Primitive Motorized 0

Roaded Natural 7,680

Rural 0

Urban 0

TABLE 9. Continued - E. Opportunity Setting Factors

		Yes	No	Remarks (How and to what extent):
1. Access				
a.	Will the type of access change (i.e. primitive jeep trails suitable for four-wheel drive vehicles to single or double lane temporary or specified roads suitable for passenger cars. Road closure or obliteration)?		X	
b.	Will the means of conveyance change (foot, horseback, four-wheel drive vehicle, high clearance vehicle, or passenger car, etc.)?		X	
c.	Will natural physical barriers which limit access be changed (steep or rocky terrain, vegetation, or rivers, etc.)?		X	
2. Non-Recreational Resource Use				
35	a.	Will the scope or extent (localized or widespread) of project change for the long-range time period?	X	The scope of the project is widespread and will be a permanent change. It follows an existing transmission line corridor. Impact will depend on VAC ratings.
	b.	Will the scale or magnitude (size of impact) of the project change for the long-range time period?	X	The size of towers will be larger than the existing transmission line towers.
3. Recreation Resource Use				
	a.	Will changes in recreation use be caused by the project that creates a need for additional facilities (trails, trailheads, barriers, toilets, etc.)?	X	
	b.	Will the development scale for proposed developed recreation sites change?	X	
	c.	Are developed or proposed recreation site development scales compatible with the management areas ROS class?	X	Antone & Iron Springs Campgrounds have a development scale of 3 and are located in a Roaded Natural setting.

TABLE 9. Continued - E. Opportunity Setting Factors

	Yes	No	Remarks (How and to what extent):
4. Social Interaction			
a. Will recreation user densities change with the project as a result of a change in access or user interest in the area?		X	Not likely. Primary use activity is hunting.
b. Will recreation user intergroup contact (number of contacts) change with the project?		X	Not likely.
c. Will recreation user conflicts increase or decrease with the project?		X	
5. Level of Visitor Impact			
a. Will the project increase or decrease the amount of wildlife harassment caused by visitors in the area?		X	
b. Will the project change the Frissell class rating on a campsite within the area?		X	
c. Will the project change the water quality appearance (visual, turbidity, coliform, etc.)?		X	
d. Will the project change the air quality?		X	
5. Level of Regimentation			
a. Will the project change the need for road or area vehicle closures?		X	
b. Will the project change need for management regulations (No rock collecting, limited length of recreation stay, horse use prohibited, No firewood collecting, etc.)?		X	

B. TAYLOR PARK CASE STUDY AREA

The Taylor Park Case Study Area is the headwaters area of Taylor River on the Gunnison National Forest. It includes the drainages of Texas, Illinois, Pieplant, Willow, Rocky Brook, Sanford and Pass Creeks. The area includes recreation opportunities for Roaded Natural, Semi-Primitive Motorized, Semi-Primitive Non-Motorized and primitive ROS experiences. Existing recreation activities are Hunting, fishing (Lake and River), Viewing scenery, Four-wheel drive touring, and camping. Camping is associated with Lakeview, Rivers End, Dinner Station Campground and dispersed hunter camps. Scenery is viewed from the Taylor River roads. The Continental Divide National Recreation trails pass across the Northeast corner of the area. Collegiate Peaks Wilderness is located in the Northeast corner of the area and receives light use. Numerous 4-wheel drive roads exist in the area.

1. DATA FROM FOREST PLAN

The Forest Land and Resource Management Plan provides the existing ROS inventory, general forest management requirements, specific management prescriptions, management area allocations and implementation guides.

Table 10 displays existing ROS areas, Ranger District location, setting, area acres, and annual capacity in recreation visitor days for the Taylor Park Case Study Area. Table 11 displays a summary of ROS classification and capacity for the Taylor Park Case Study Area. Figure 7 displays the current inventory maps for the Taylor Park Case Study Area. The Forest management requirements for recreation are displayed in Appendix D. Specific management prescriptions for recreation direction in the Taylor Park Case Study Area are displayed in Appendix E. Figure 8 displays a map showing the prescriptions applied to management areas in the Taylor Park Case Study Area.

TABLE 10. ROS Inventory Data.

RANGER DISTRICT	ROS			
	Area No.	Setting	Acres	RVD's Capacity
Taylor River	24	RN	25,625	447,420
Taylor River	25	SPM	5,900	2,080
Taylor River	27	SPM	19,300	23,838
Taylor River	41	SPM	12,800	9,997
Taylor River	26	SPNM	5,850	5,119
Taylor River	38	SPNM	8,510	786
Taylor River	39	SPNM	3,300	1,040
Taylor River	40	SPNM	3,200	366
Taylor River	Wilderness	P	11,520	x
		TOTAL	96,005	490,646

TABLE 11. ROS classificat Summary.

ROS Class	Acres	RVD's Capacity
RN	25,625,	447,420
SPM	38,000	35,915
SPNM	20,860	7,311
Wilderness (P)	11,520	x

FIGURE 7. ROS Map

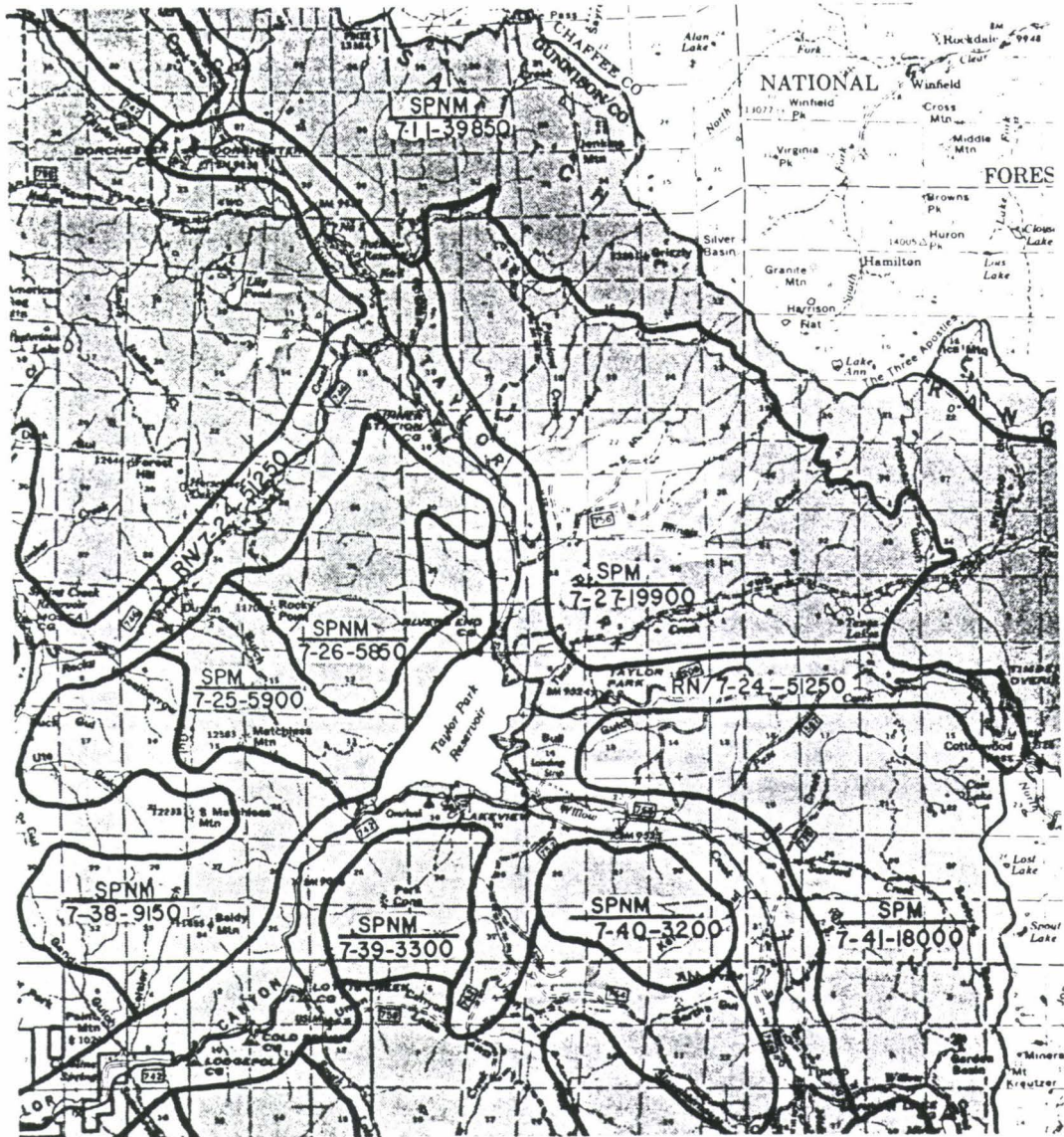
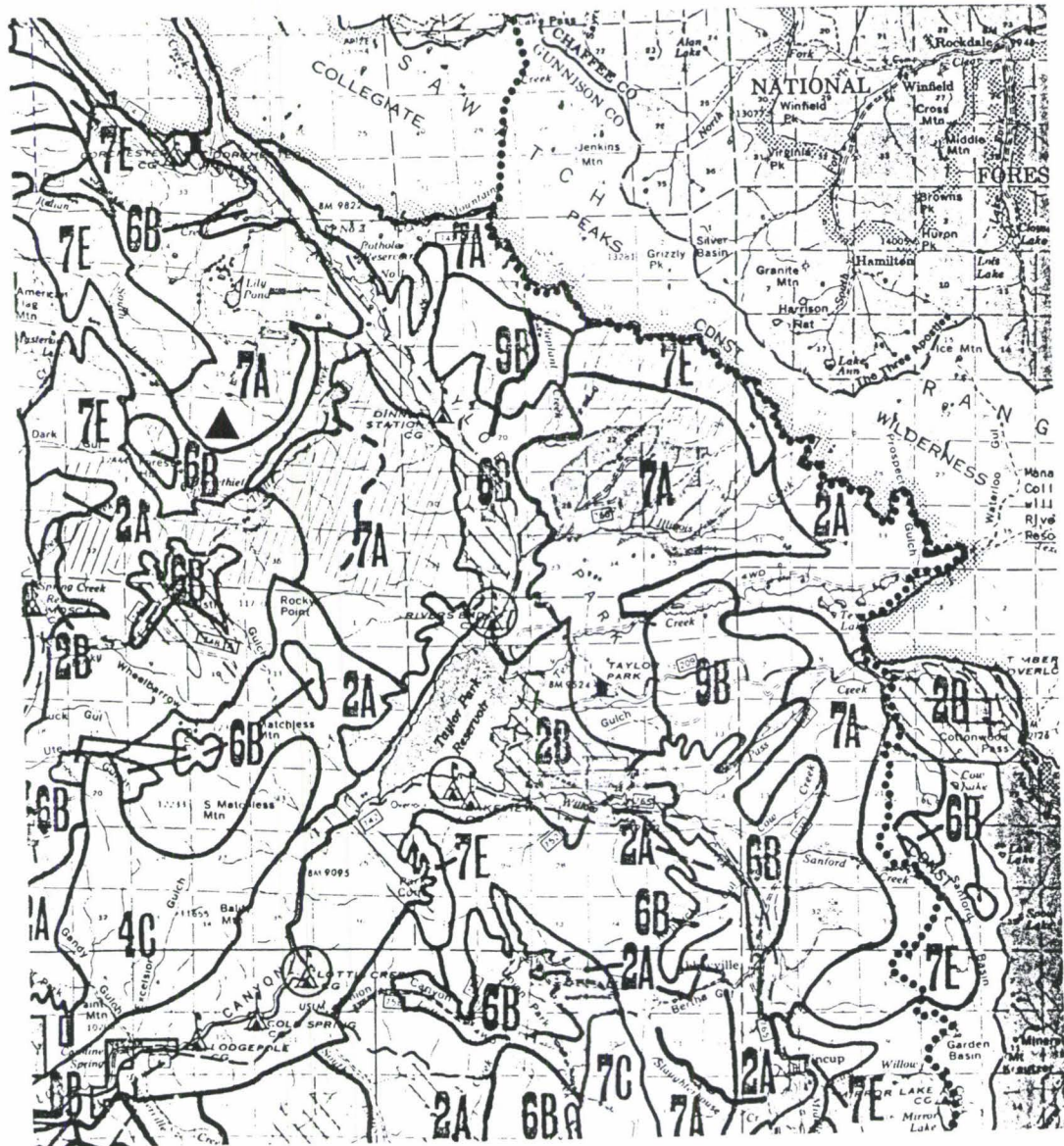


FIGURE 8. Prescription Allocation Map



2. EVALUATING CONSEQUENCES OF MANAGEMENT ACTIONS

Three management actions are proposed for the Taylor Park Case Study Area. They are: 1. Illinois Creek Timber Sale, 2. Cottonwood Pass Road Improvement (realignment), and 3. Lakeview Campground Expansion. Examples of the ROS Class Analysis Checklist and environment assessment document consequence summary for each project follow. Figure 9 displays the location of the management actions. Table 12 displays the ROS Class Analysis Checklist for the Illinois Creek Timber Sale.

FIGURE 9. Proposed Management Action Locations.

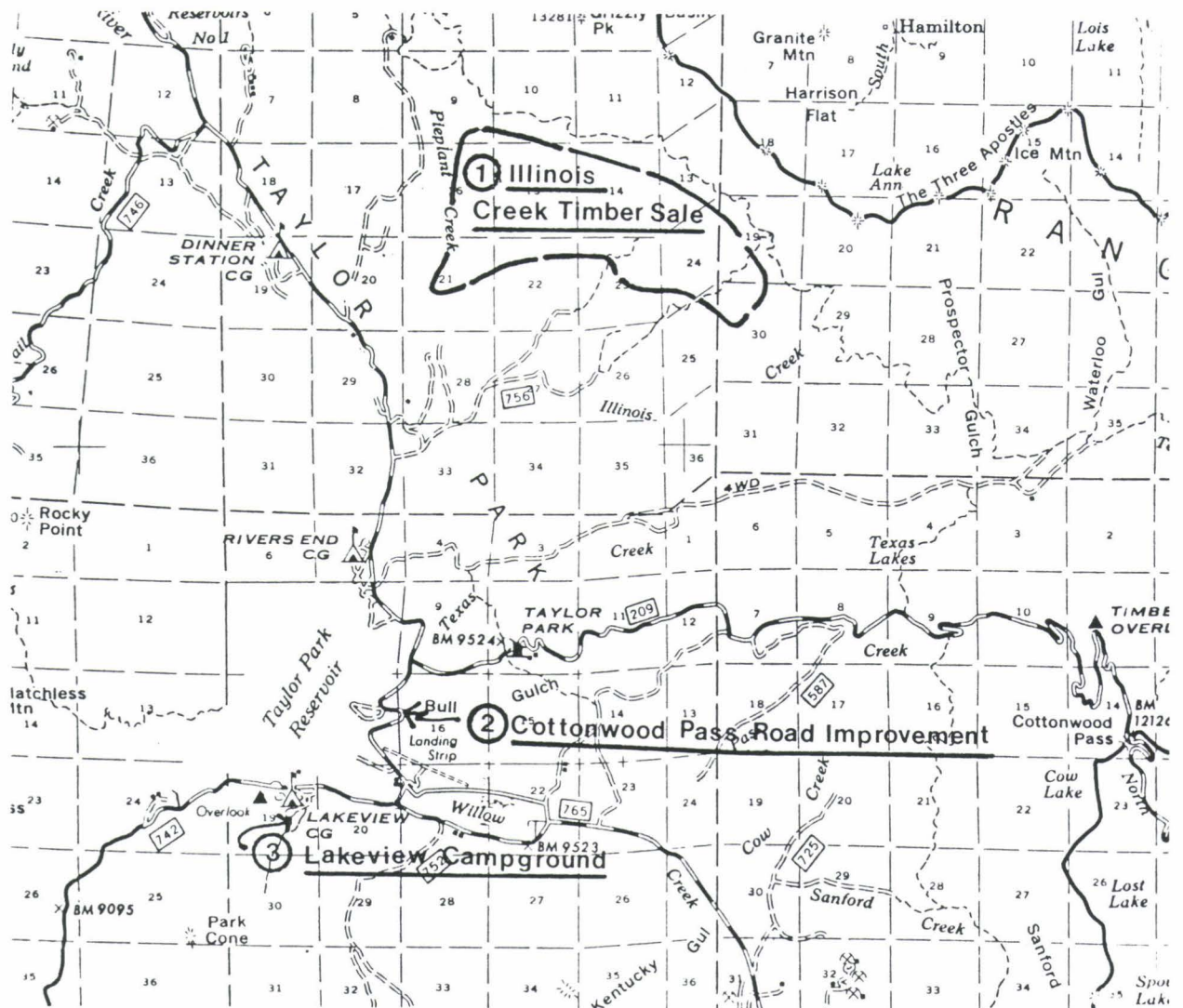


TABLE 12. Illinois Creek Timber Sale.

ROS CLASS ANALYSIS CHECKLIST

A. Project

Name Illinois Creek Timber Sale

Location Taylor Park

B. Existing ROS Class Acres (From current inventory).

Primitive 0

Semi-Primitive Non-Motorized 0

Semi-Primitive Motorized 2,300

Roaded Natural 0

Rural 0

Urban 0

C. Visual Absorption Capability Acres (From current inventory).

Low 150

Intermediate 1,270

High 880

D. Resultant ROS Class Acres (Includes both short and long term).

Primitive 0

Semi-Primitive Non-Motorized 0

Semi-Primitive Motorized 2,300

Roaded Natural 0

Rural 0

Urban 0

TABLE 12. Continued - E. Opportunity Setting Factors

	Yes	No	Remarks (How and to what extent):
1. Access			
a. Will the type of access change (i.e. primitive jeep trails suitable for four-wheel drive vehicles to single or double lane temporary or specified roads suitable for passenger cars. Road closure or obliteration)?	X		5 miles of 4-wheel drive (primitive) road will be replaced with 7 mile of new single lane specified road and 1 mile of reconstructed road. The primitive road would be closed and obliterated.
b. Will the means of conveyance change (foot, horseback, four-wheel drive vehicle, high clearance vehicle, or passenger car, etc.)?	X		The new road will be suitable for high clearance vehicles and may be used by some passenger cars.
c. Will natural physical barriers which limit access be changed (steep or rocky terrain, vegetation, or rivers, etc.)?	X		The areas access goes thru private land. The new road will insure access in the future.
2. Non-Recreational Resource Use			
a. Will the scope or extent (localized or widespread) of project change for the long-range time period?	X		Treatment area is moderate in size and will be made by commercial timber sale. Harvest method will be clear cut. The species is primarily lodgepole & will take time before it is perceived as semi-primitive forest. Future timber management may change this area to RN.
b. Will the scale or magnitude (size of impact) of the project change for the long-range time period?	X		The magnitude of specific treated areas will be limited to 40 acres and will generally be under 15 acres in size.
3. Recreation Resource Use			
a. Will changes in recreation use be caused by the project that creates a need for additional facilities (trails, trailheads, barriers, toilets, etc.)?	X		A gate may be needed on the new road to regulate wildlife harassment during hunting season.
b. Will the development scale for proposed developed recreation sites change?	X		None exist or are proposed.
c. Are developed or proposed recreation site development scales compatible with the management areas ROS class?		N/A	

TABLE 12. Continued - E. Opportunity Setting Factors

		Yes	No	Remarks (How and to what extent):
4. Social Interaction				
a.	Will recreation user densities change with the project as a result of a change in access or user interest in the area?		X	Not likely. Primary use activity is hunting.
b.	Will recreation user intergroup contact (number of contacts) change with the project?		X	Not likely.
c.	Will recreation user conflicts increase or decrease with the project?	X		Some hunter vehicle use conflict can be expected since motorized access may be restricted during hunting season.
5. Level of Visitor Impact				
a.	Will the project increase or decrease the amount of wildlife harassment caused by visitors in the area?	X		With seasonal closures it may reduce wildlife harassment.
b.	Will the project change the Frissell class rating on a campsite within the area?		X	
c.	Will the project change the water quality appearance (visual, turbidity, coliform, etc.)?		X	
d.	Will the project change the air quality?		X	
6. Level of Regimentation				
a.	Will the project change the need for road or area vehicle closures?	X		Approximately 5 miles of primitive road would be closed and obliterated.
b.	Will the project create need for management regulations (No rock collecting, limited length of recreation stay, horse use prohibited, No firewood collecting, etc.)?	X		See "a." above.

The environmental consequences of the Illinois Creek Timber Sale are summarized as follows: Semi-primitive Motorized (SPM) recreation opportunities occur on 2,300 acres in the project area. Existing primitive roads have made this area motorized. Travel management displays the area open yearlong to motorized vehicles on or off forest roads. Seasonal road closures will change access during the time of closures and impact hunting. Approximately 7 miles of new single lane specified road will replace the existing primitive road system. In order to maintain this SPM area the primitive road will be closed and obliterated and the clear cut unit will be kept small (generally 15 acres) in size. Some increase in user regimentation will be created by the seasonal closure. The area will continue to be classified as a SPM setting.

Table 13 displays the ROS Class Analysis Checklist for Cottonwood Pass Road Improvement.

TABLE 13. Cottonwood Pass Road Improvement

ROS CLASS ANALYSIS CHECKLIST

A. Project

Name Cottonwood Pass Road Improvement

Location Taylor Reservoir Dam to Cottonwood Intersection

B. Existing ROS Class Acres (From current inventory).

Primitive 0

Semi-Primitive Non-Motorized 0

Semi-Primitive Motorized 0

Roaded Natural 5.2 miles approximately 3,328

Rural 0

Urban 0

C. Visual Absorption Capability Acres (From current inventory).

Low 3,328

Intermediate 0

High 0

D. Resultant ROS Class Acres (Includes both short and long term).

Primitive 0

Semi-Primitive Non-Motorized 0

Semi-Primitive Motorized 0

Roaded Natural 5.2 miles approximately 3,328

Rural 0

Urban 0

TABLE 13. Continued - E. Opportunity Setting Factors

	Yes	No	Remarks (How and to what extent):
1. Access			
a. Will the type of access change (i.e. primitive jeep trails suitable for four-wheel drive vehicles to single or double lane temporary or specified roads suitable for passenger cars. Road closure or obliteration)?		X	
b. Will the means of conveyance change (foot, horseback, four-wheel drive vehicle, high clearance vehicle, or passenger car, etc.)?		X	The percent of passenger cars can be expected to increase.
c. Will natural physical barriers which limit access be changed (steep or rocky terrain, vegetation, or rivers, etc.)?		X	
2. Non-Recreational Resource Use			
a. Will the scope or extent (localized or widespread) of project change for the long-range time period?		X	Project includes 5.2 miles of higher standard road and one bridge.
b. Will the scale or magnitude (size of impact) of the project change for the long-range time period?		X	The road will permanently be improved to a paved standard.
3. Recreation Resource Use			
a. Will changes in recreation use be caused by the project that creates a need for additional facilities (trails, trailheads, barriers, toilets, etc.)?		X	Some additional use can be expected and may cause demand to change the change the ROS setting of Cranor complex to Rural.
b. Will the development scale for proposed developed recreation sites change?		X	Lakeview Campground has a development scale of 3.
c. Are developed or proposed recreation site development scales compatible with the management areas ROS class?		X	

TABLE 13. Continued - E. Opportunity Setting Factors

	Yes	No	Remarks (How and to what extent):
4. Social Interaction			
a. Will recreation user densities change with the project as a result of a change in access or user interest in the area?	X		Slight.
b. Will recreation user intergroup contact (number of contacts) change with the project?	X		More frequent.
c. Will recreation user conflicts increase or decrease with the project?	X		Will increase user setting conflicts, and possibly multiple use user conflicts.
5. Level of Visitor Impact			
a. Will the project increase or decrease the amount of wildlife harassment caused by visitors in the area?		X	
b. Will the project change the Frissell class rating on a campsite within the area?		X	
c. Will the project change the water quality appearance (visual, turbidity, coliform, etc.)?		X	
d. Will the project change the air quality?		X	
6. Level of Regimentation			
a. Will the project change the need for road or area vehicle closures?		X	
b. Will the project create need for management regulations (No rock collecting, limited length of recreation stay, horse use prohibited, No firewood collecting, etc.)?		X	

The environmental consequences of the Illinois Creek Timber Sale are summarized as follows: Roaded Natural (RN) recreation opportunity occurs on 3,328 acres adjacent to the 5.2 mile Cottonwood Pass Road improvement project. The road will bypass the Cranor complex (Private land - resort) and may cause some demand to change the cranor complex to a Rural (R) recreation opportunity. However, the area is expected to remain classified as a RN setting.

Table 14 displays the ROS Class Analysis Checklist for Lakeview Campground.

TABLE 14. Lakeview Campground

ROS CLASS ANALYSIS CHECKLIST

A. Project

Name Lakeview Campground (expand to 60 units)

Location Taylor Park Reservoir

B. Existing ROS Class Acres (From current inventory).

Primitive 0

Semi-Primitive Non-Motorized 0

Semi-Primitive Motorized 0

Roaded Natural 50

Rural 0

Urban 0

C. Visual Absorption Capability Acres (From current inventory).

Low 0

Intermediate 50

High 0

D. Resultant ROS Class Acres (Includes both short and long term).

Primitive 0

Semi-Primitive Non-Motorized 0

Semi-Primitive Motorized 0

Roaded Natural 50

Rural 0

Urban 0

TABLE 14. Continued - E. Opportunity Setting Factors

	Yes	No	Remarks (How and to what extent):
1. Access			
a. Will the type of access change (i.e. primitive jeep trails suitable for four-wheel drive vehicles to single or double lane temporary or specified roads suitable for passenger cars. Road closure or obliteration)?	X		Type of access will not change, but the amount of campground road will double.
b. Will the means of conveyance change (foot, horseback, four-wheel drive vehicle, high clearance vehicle, or passenger car, etc.)?		X	
c. Will natural physical barriers which limit access be changed (steep or rocky terrain, vegetation, or rivers, etc.)?	X		Steep terrain will be accessed by a road.
2. Non-Recreational Resource Use			
a. Will the scope or extent (localized or widespread) of project change for the long-range time period?		N/A	
b. Will the scale or magnitude (size of impact) of the project change for the long-range time period?		N/A	
3. Recreation Resource Use			
a. Will changes in recreation use be caused by the project that creates a need for additional facilities (trails, trailheads, barriers, toilets, etc.)?	X		Additional day facilities may be needed such as trailheads, and lake access.
b. Will the development scale for proposed developed recreation sites change?		X	Present development scale is 3. Expanded campground would be designed for a development scale 3.
c. Are developed or proposed recreation site development scales compatible with the management areas ROS class?		X	

TABLE 14. Continued - E. Opportunity Setting Factors

		Yes	No	Remarks (How and to what extent):
4. Social Interaction				
a.	Will recreation user densities change with the project as a result of a change in access or user interest in the area?	X		Some increase in user density would be expected, but it would still be within existing ROS class capacities.
b.	Will recreation user intergroup contact (number of contacts) change with the project?		X	
c.	Will recreation user conflicts increase or decrease with the project?		X	
5. Level of Visitor Impact				
a.	Will the project increase or decrease the amount of wildlife harassment caused by visitors in the area?		X	
b.	Will the project change the Frissell class rating on a campsite within the area?		X	
c.	Will the project change the water quality appearance (visual, turbidity, coliform, etc.)?		X	
d.	Will the project change the air quality?		X	
6. Level of Regimentation				
a.	Will the project change the need for road or area vehicle closures?		X	
b.	Will the project create need for management regulations (No rock collecting, limited length of recreation stay, horse use prohibited, No firewood collecting, etc.)?		X	

V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The Recreation Opportunity Spectrum is both a planning and management tool. In planning it provides a data base of the existing recreation opportunity settings and direction as to what recreation opportunity settings are planned. In management it is useful in evaluating and monitoring the effects of management activities to ensure that the desired recreation opportunity setting is achieved. The management activities that affect the recreation opportunity can be recreation project, recreation use or projects involving other resources. Impacts on access, non-recreational resource use, recreation resource use, social interaction, level of visitor impact, and level of regimentation should all be considered as part of these evaluations. Inconsistencies in physical, social and managerial recreation opportunities setting should be identified and actions taken to resolve the inconsistencies.

Recommendations

Managing with ROS will remain a planning tool and not applied to management application unless the following actions are taken:

1. The ROS Users Guide deals with concept and planning. It needs to be expanded to include management applications.
2. Require the use of the ROS checklist for all projects requiring environmental assessments on the Grand Mesa, Uncompahgre and Gunnison National Forest.

APPENDIX

- A. Excerpts from ROS Users Guide
- B. Frissell Campsite Condition Class
- C. Visual Absorption Capability
- D. Excerpts from Forest Plan General Forest Direction
- E. Excerpts from Forest Plan Prescriptions
- F. Prescription / ROS Chart
- G. Prescription / Transportation Planning Chart
- H. Forest Plan ROS Implementation Direction
- I. Travel Management Criteria

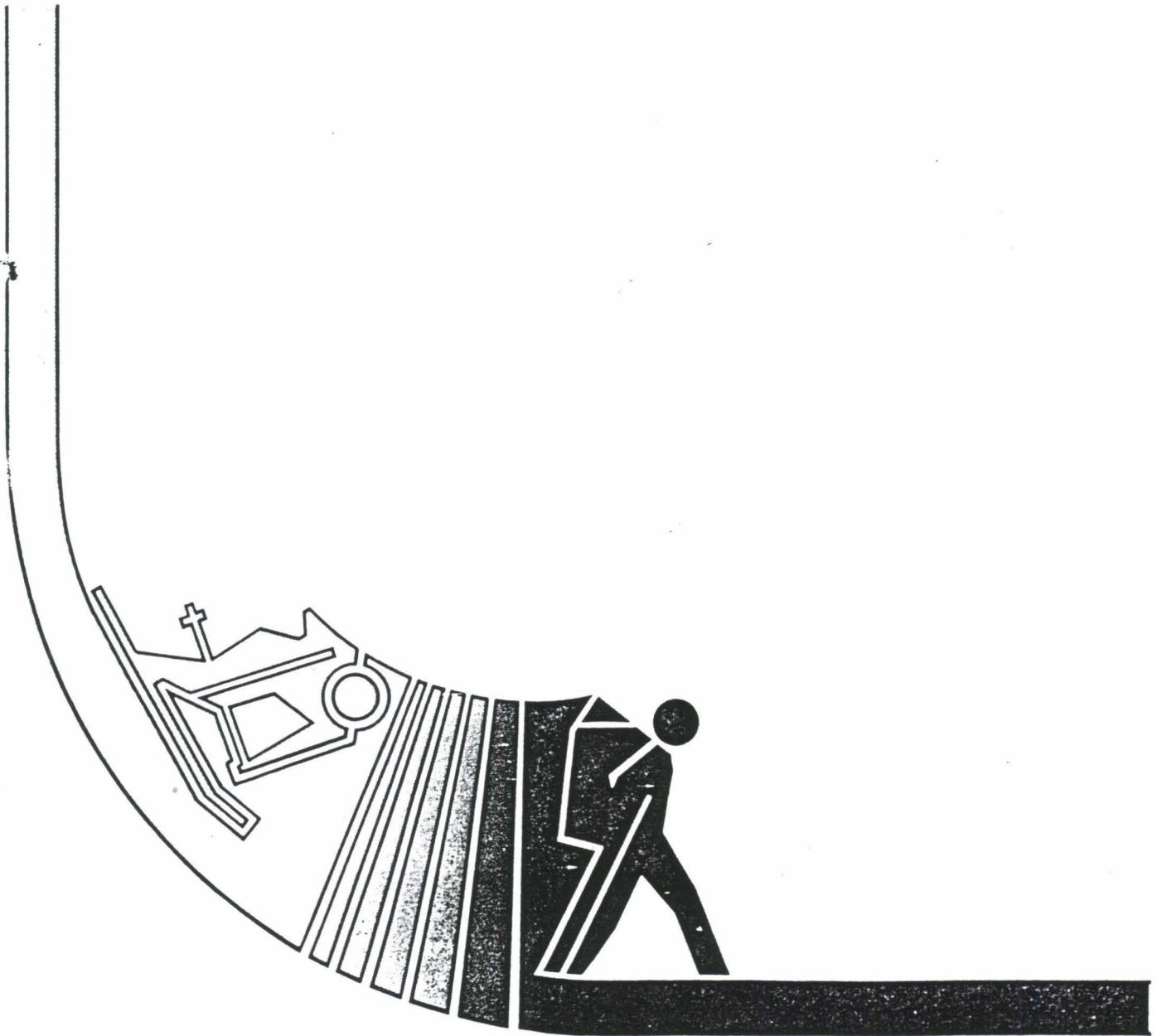
United States
Department of
Agriculture

Forest
Service



ROS

Users Guide



11—RECREATION

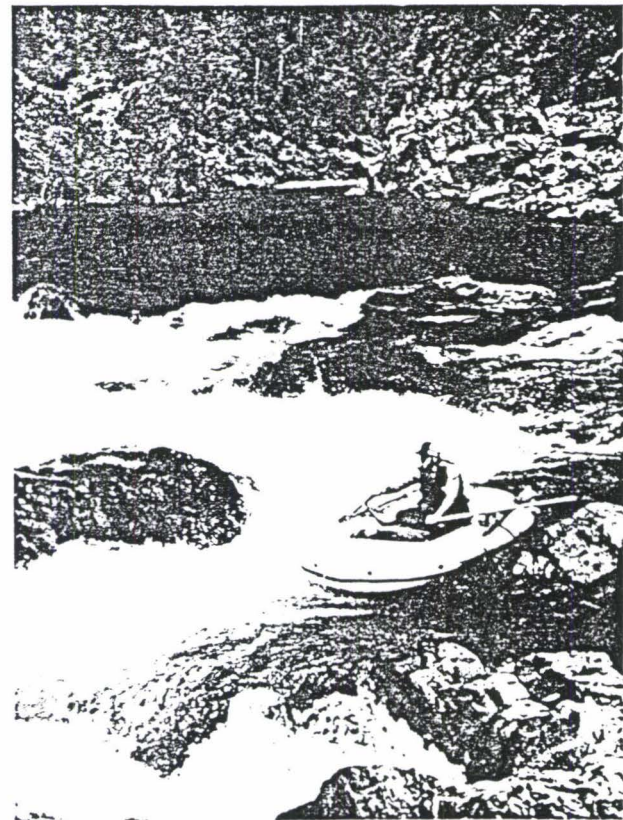
Many definitions of recreation exist, each emphasizing some slightly different aspect of this complex phenomenon called "recreation." In the *Recreational Use of Wild Lands*, Frank Brockman defines recreation as "the pleasurable and constructive use of spare time." Howard Danford, in *Creative Leadership in Recreation*, defines recreation as "any socially desirable leisure activity in which an individual participates voluntarily and from which he derives immediate and continuing satisfaction." Webster defines recreation as "refreshment in mind and body."

The sense of creativeness, refreshment and pleasure which the recreationist has while recreating or having a good time can be viewed as the recreationist "realizing satisfactory experiences." The recreationist attains these satisfactory experiences by participating in preferred recreation activities in preferred surroundings or settings. Therefore although the recreation resource manager manages settings, he or she does so to provide opportunities for recreation experiences and the benefits those experiences produce for individuals and society. Those experiences are influenced by many factors, the settings, the activities, other resources present, activities by managers, and by the values, expectations and other characteristics of the recreationists. These factors interrelate to define outdoor recreationists' needs and the way these needs are met by management action.

"Managing for recreation requires different kinds of data and management concepts than does most other activities. While recreation must have a physical base of land or water, the product—recreation experience—is a personal or social phenomenon. Although the management is resource based, the actual recreational activities are a result of people, their perceptions, wants, and behavior." (From: Final Report of the Committee of Scientists for Implementation of Section 6 of the National Forest Management Act of 1976, February 22, 1979, as published in the Federal Register, Part V, May 4, 1979, p. 26628.)

12—RECREATION OPPORTUNITY

The word opportunity is defined as a "combination of circumstances favorable for a purpose." The purpose or goal of the recreationist, as discussed above, is to realize satisfying experiences. This is done by participating in preferred activities in preferred environmental settings. Thus, recreation opportunity is "the availability of a real choice for a user to participate in a preferred activity within a preferred setting, in order to realize those satisfying experiences which are desired."



13—RECREATION OPPORTUNITY SPECTRUM

While the goal of the recreationist is to obtain satisfying experiences, the goal of the recreation resource manager becomes one of providing the opportunities for obtaining these experiences. By managing the natural resource settings, and the activities which occur within it, the manager is providing the opportunities for recreation experiences to take place. Therefore, for both the manager and the recreationist, recreation opportunities can be expressed in terms of three principal components: the activities, the setting, and the experience.

For management and conceptual convenience possible mixes or combinations of activities, settings, and probable experience opportunities have been arranged along a spectrum, or continuum. This continuum is called the Recreation Opportunity Spectrum (ROS) and is divided into six classes (Figure 1). The six classes, or portions along the continuum, and the accompanying class names have been selected and conventionalized because of their descriptiveness and utility in Land and Resource Management Planning and other management applications.

Each class is defined in terms of its combination of activity, setting, and experience opportunities (Table 1). Subclasses may be established to reflect local or regional conditions as long as aggregations can be made back to the six major classes for regional or national summaries. An example of a subclass may be a further breakdown of Roaded Natural into subclasses based on paved, oiled, or dirt surfaced roads, which in turn reflects amount of use, or a further breakdown of Primitive based upon aircraft or boat use.

The Recreation Opportunity Spectrum provides a framework for defining the types of outdoor recreation opportunities the public might desire, and identifies that portion of the spectrum a given National Forest might be able to provide.

Figure 1

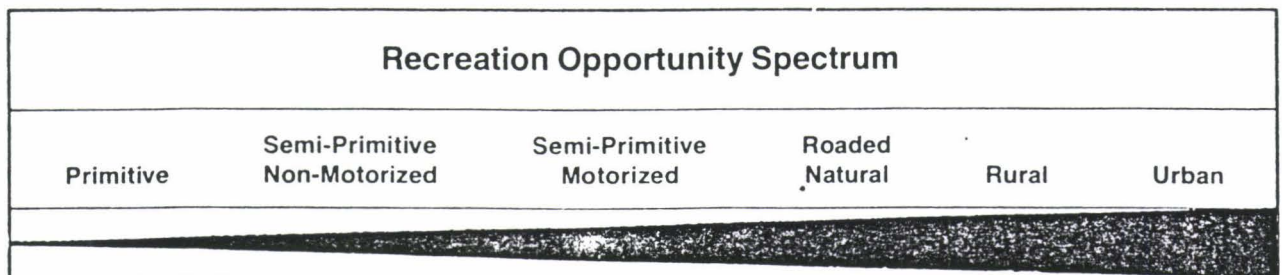


Table 1

ROS Activity Characterization*					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
<u>Land Based (includes Aircraft):</u> Viewing Scenery Hiking and Walking Horseback Riding Camping (all) Hunting (all) Nature Study (all) Mountain Climbing General Information	<u>Land Based (includes Aircraft):</u> Viewing Scenery Automobile (off-road use) Motorcycles and Scooters Specialized landcraft Aircraft (motorized) Hiking and Walking Horseback Riding Camping (all) Hunting (all) Nature Study (all) Mountain climbing General Information	<u>Land Based (includes Aircraft):</u> Viewing Scenery Viewing Activities Viewing Works of Human-Kind Automobile (includes off-road use) Motorcycles and Scooters Specialized landcraft Train and bus touring Aircraft (motorized) Aerial trams and lifts Aircraft (non-motorized) Hiking and Walking Bicycling Horseback riding Camping (all) Organization Picnicking Resort and Commercial services Resort Lodging Recreation Cabin use Hunting (all) Nature Studies (all) Mountain climbing Gathering Forest Products Interpretive Services (all)	<u>Land Based:</u> Viewing Scenery Viewing Activities Viewing Works of Humankind Automobile (includes off-road use) Motorcycles and Scooters Specialized land-craft Train and bus touring Aircraft (motorized) Aerial trams and lifts Aircraft (non-motorized) Hiking and Walking Bicycling Horseback riding Camping (all) Organization Camping (all) Picnicking Resort and Commercial services Resort Lodging	<u>Land Based (includes Aircraft):</u> Recreation Cabin use Hunting (all) Nature Studies (all) Mountain climbing Gathering Forest Products Interpretive Services (all) Team Sports Individual Sports Games and Play	<u>Land Based:</u> Viewing Scenery Viewing Activities Viewing Works of Humankind Automobile (includes off-road use) Motorcycles and Scooters Specialized land-craft Train and bus touring Aircraft (motorized) Aerial trams and lifts Aircraft (non-motorized) Hiking and Walking Bicycling Horseback riding Camping (all) Organization Camping (all) Picnicking Resort and Commercial services Resort Lodging
<u>Water Based:</u> Canoeing Sailing Other non-motorized watercraft Swimming Fishing (all)	<u>Water Based:</u> Boating (powered) Canoeing Sailing Other watercraft Swimming Diving (skin or scuba) Fishing (all)	<u>Water Based:</u> Tour Boat and Ferry Boat Powered Canoeing Sailing Other watercraft Swimming and waterplay Diving (skin and scuba) Waterskiing and water-sports Fishing (all)	<u>Water Based:</u> Tour Boat and Ferry Boat Powered Canoeing Sailing Other watercraft Swimming and waterplay Diving (skin and scuba) Waterskiing and water sports Fishing	<u>Water Based:</u> Tour Boat and Ferry Boat Powered Canoeing Sailing Other watercraft Swimming and waterplay Diving (skin and scuba) Waterskiing and water sports Fishing	<u>Water Based:</u> Tour Boat and Ferry Boat Powered Canoeing Sailing Other watercraft Swimming and waterplay Diving (skin and scuba) Waterskiing and water sports Fishing
<u>Snow and Ice Based:</u> Snowplay X-Country Skiing/Snowshoeing	<u>Snow and Ice Based:</u> Ice and Snowcraft Skiing, downhill Snowplay X-Country Skiing/snow-shoeing	<u>Snow and Ice Based:</u> Ice and Snowcraft Ice Skating Sledding and Tobogganing Downhill skiing Snowplay X-Country skiing/snow shoeing	<u>Snow and Ice Based:</u> Ice and Snowcraft Ice Skating Sledding and Tobogganing Downhill skiing Snowplay X-Country skiing/snow shoeing	<u>Snow and Ice Based:</u> Ice and Snowcraft Ice skating Sledding and Tobogganing Downhill skiing Snowplay X-Country skiing/snow shoeing	<u>Snow and Ice Based:</u> Ice and Snowcraft Ice skating Sledding and Tobogganing Downhill skiing Snowplay X-Country skiing/snow shoeing

*These activity characteristics (from R I M FSH 2309.11) are illustrative only. Specific additions or exception of activities within a ROS class may occur depending upon local forest situations.

Table 1 (continued)

ROS Setting Characterization*					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is not permitted.	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted.	Area is characterized by predominantly natural-appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.	Area is characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available.	Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans, on-site, are predominant. Large numbers of users can be expected, both on-site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

*This table is for descriptive purposes only.
Use the five specific ROS class delineation criteria given in Table 2 to identify the actual areas to which these descriptions apply.

ROS Experience Characterization*					
Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
Extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers a high degree of challenge and risk.	High, but not extremely high, probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk.	Moderate probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk. Opportunity to have a high degree of interaction with the natural environment. Opportunity to use motorized equipment while in the area.	About equal probability to experience affiliation with other user groups and for isolation from sights and sound of humans. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities associated with more primitive type of recreation are not very important. Practice and testing of outdoor skills might be important. Opportunities for both motorized and non-motorized forms of recreation are possible.	Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. These factors are generally more important than the setting of the physical environment. Opportunities for wild-land challenges, risk-taking, and testing of outdoor skills are generally unimportant except for specific activities like downhill skiing, for which challenge and risk-taking are important elements.	Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. Experiencing natural environments, having challenges and risks afforded by the natural environment, and the use of outdoor skills are relatively unimportant. Opportunities for competitive and spectator sports and for passive uses of highly human-influenced parks and open spaces are common.

* These experiences are highly probable outcomes of participating in recreation activities in specific recreation settings.

APPENDIX B

Frissell's Campsite Condition Class and Possible Management Actions

Condition class	Visible indicators	Management
1.	Ground vegetation flattened but not permanently injured. Minimal physical change except for possibly a simple rock fireplace.	These sites are barely recognizable as camping areas. If not in situations known to be sensitive to use (e.g., wet or slump areas), no management action is necessary. Maintain current use level or allow increase if nearby sites must be closed.
2.	Ground vegetation worn away around fireplace or center or activity.	Site change now apparent but still within acceptable limits. These areas are readily identified as campsites and will continue to attract use. Future use should be carefully monitored to detect adverse change.
3.	Ground vegetation lost on most of the site, but humus and litter still present in all but a few areas.	This is a transitional condition. Considerable change in plant cover is evident but little sign of soil problems. The condition may be accepted as normal in areas of high attraction. However, modification of current use patterns and intensities may be needed to prevent further change.
4.	Bare mineral soil widespread. Tree roots exposed on the surface.	Deterioration is accelerating. If current level and type of use continues, soil erosion, loss of tree cover, and esthetic degradation are likely. Withdraw use from these sites and allow recovery. Some artificial rehabilitation may be desirable to speed recovery. If site is improperly located, permanent closure should be considered. If site is reopened, insure that use patterns are adjusted to prevent reinjury.
5.	Soil erosion obvious. Trees reduced in vigor or dead.	Natural recovery will be extremely slow. The sites should be closed permanently and alternate ones located. If the site is critical to the recreation pattern, extensive rehabilitation will be required to return it to acceptable condition.

APPENDIX C

VISUAL ABSORPTION CAPABILITY

Definition - Visual Absorption Capability (VAC) estimates the relative ability of a tract of land to withstand management manipulations without significantly affecting its visual character. It judges the relative capability of the land to absorb visual change.

Purpose - Assessment of VAC provides an objective basis for predicting how difficult it will be for management manipulations of the landscape to meet recommended or adopted visual quality objectives (VQO). It provides the basis from which an interdisciplinary team, containing experts in the field of the project in question, can determine the relative costs of meeting a particular VQO. VAC provides assistance in determining where to locate such things as roads, utility lines, microwave stations, fuel breaks, rock quarries, etc., with the least visual impact. VAC assists in determining priorities for landscape architect involvement in project planning by identifying areas most visually vulnerable.

Method

A VAC study will normally consist of three parts:

1. Factor determination.

The factors which are appropriate to the problem must be determined--examples would be "slope," "complexity," "soil color," etc. Then, the degree of detail needed must be determined--examples are found in "first order inventory," "second order inventory," etc. (see _____. Appropriateness of factors depends upon local conditions. Some or occasionally all of the following would normally be considered when inventorying for project level work:

Physical Factors

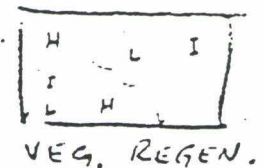
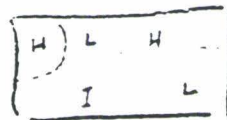
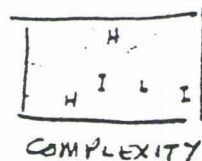
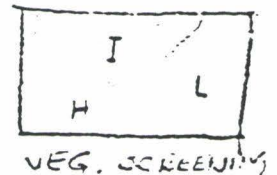
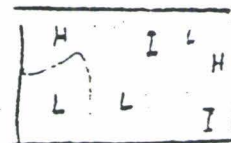
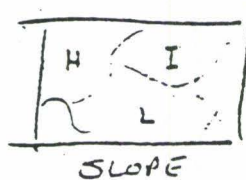
- A. Complexity of the landscape
- B. Slope

- C. Vegetative Screening Potential
- D. Vegetative Regeneration Potential
- E. Soil and Rock Color Contrast Potential

Observer Position Factors

- F. Relation to Focal Points
- G. Visibility Index (Percentage of Times Visible)
- H. Visual Magnitude

2. A map of each chosen factor—with its degree of visual absorption capacity. (Usually High, Intermediate, and Low):



3. A composit map. If one or more factors are deemed to be significantly more important than the others, it or they can be "weighted" as necessary. The individual factor maps are overlaid, interfaced by computer, or otherwise combined. The resulting map should display the overall VAC of the area being studied. For purposes of simplicity, it will ordinarily be desirable to utilize three VAC classes--High, Intermediate and Low. The areas mapped "High" are those with the highest absorptive capability for visual change--the easiest, lowest cost areas in which to work from the visual resource standpoint. "Low" areas are those which will visually absorb little or no change--are difficult and costly for projects of visual impact.

FOREST DIRECTION

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

Management of
Developed
Recreation Sites
(A08, 09, 11 &
13)

01 Design, construct and operate developed sites
which are adjacent to or provide an access point
into a wilderness to complement wilderness management
objectives.
(0350) (FDR)

02 Construct, reconstruct and maintain developed
sites in accordance with the established Recreation
Opportunity Spectrum (ROS) classification for the
management area.
(0348) (FDR)

a. Standards and Guidelines

ROS Class*	Site Development Scale**
P	Not to exceed 1
SPNM	Not to exceed 2
SPM	Not to exceed 2
RN	Class 3 or 4
R	Class 3 or 4
U	Class 5

* P = Primitive
SPNM = Semi-primitive non-
motorized
SPM = Semi-primitive
motorized
RN = Roaded Natural
R = Rural
U = Urban
** FSM 2331.47
(6193) (FDR)

03 Manage development scale 3 and 4 sites for
full service when at least one of the following
are met:

- a. A campground is designated as a fee site;
 - b. More than 20 percent of theoretical capacity
is being utilized;
 - c. A group campground or picnic ground has a
reservation system and/or user fee; or
 - d. The site is a swimming site, a boating site
with a constructed ramp, or a staffed visitor
information center.
- (0349) (FDR)

a. FSM 2331.47
(6652) (FDR)

FOREST DIRECTION

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

Dispersed
Recreation
Management
(A14 and 15)

01 Provide a broad spectrum of dispersed recreation opportunities in accordance with the established Recreation Opportunity Spectrum (ROS) classification for the management area.
(0351) (FDR)

02 Close or rehabilitate dispersed sites where unacceptable environmental damage is occurring.
(0040) (FDR)

03 Manage dispersed recreation activities to not exceed the established ROS PAOT/acre capacity.
Manage use of trails in dispersed areas to not exceed the established PAOT/mile of trail guidelines.
(0352) (FDR)

a. Close sites that cannot be maintained in Frissell Condition Class 1, 2, or 3 (Campsite Condition, Frissell, S.S.; Journal of Forestry August 1978).
(6023) (FDR)

b. Rehabilitate sites that are in Frissell condition classes 4 or 5.
(8022GM) (FDR)

a. Standards and Guidelines:

Recreation use and capacity range during the snow-free period (PAOT/acre):

Trail use and capacity range (PAOT/mile of trail):

Capacity Range

Use Level	Very Low	Low	Moderate	High

ROS class	Primitive			

On Trails PAOT/Mile	0.5	1.0	2.0	3.0

Area wide PAOT/acre	.001	.002	.007	.025

ROS Class	Semi-Primitive Nonmotorized			

On Trails PAOT/mile	2.0	3.0	9.0	11.0

Area-wide PAOT/acre	.004	.008	.05	.08

FOREST DIRECTION

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
Dispersed
Recreation
Management
(A14 and 15)

ROS Class - Semi-Primitive
Motorized

On Trails
PAOT/mile 2.0 3.0 9.0 11.0

Area-wide
PAOT/acre .004 .008 .05 .08

ROS Class - Roaded Natural

On Trails
PAOT/mile - - - -

Area-wide
PAOT/acre .04 .08 1.2 2.5

ROS Class - Rural

On Trails
PAOT/mile - - - -

Area-wide
PAOT/acre .5 .8 5.0 7.5

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.

* VERY LOW applies to alpine.

LOW applies to rock, mtn. grass, and clearcuts 1-20 years old.

MODERATE applies to LP size class 9, mtn. grass, PP size class 9, B and 7, DF size class 9, B and 7, Aspen size class 9, SF size class 7, shelterwood cuts 90-120 years old, selection cuts 1-20 years old and clearcuts 80-120 years old.

HIGH applies to SF size class 9, B and 7, LP size class B and 7,

FOREST DIRECTION

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

04 Prohibit camping within a minimum of 100 feet from
lakes and streams unless exceptions are justified by
terrain or specific design which protects the riparian
and aquatic ecosystems.
(0353) (FDR)

05 Manage resource activities and facilities
in accordance with the Regional Acceptable Work
Standards.
(0391) (FDR)

a. FSM 1310 R2 ID No. 1 7/22/82
(6194) (FDR)

MANAGEMENT PRESCRIPTION 02A

Semi-primitive motorized recreation opportunities. Range management will reduce conflicts between recreation and livestock.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Dispersed Recreation Management (A14 and 15)	01 Emphasize semi-primitive motorized recreation opportunities. Increase opportunities for primitive road motorized trail use. Specific land areas or travel routes may be closed seasonally or year-round for compatibility with adjacent area management, to prevent resource damage, for economic reasons, to prevent conflicts of use, and for user safety. (0152) (2A)	a. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (2A)
	02 Manage use to allow low to moderate contact with other groups and individuals. (0238) (2A)	a. Maximum use and capacity levels are: -Trail and camp encounters during peak use days are less than 30 other parties per day. -Trail and area-wide use capacity: ----- ROS Class - Semi-Primitive Motorized ----- Use Very Moder- High Level Low Low ate ----- On Trails PAOT/ mile 2.0 3.0 9.0 11.0 ----- Area-wide PAOT/ acre .004 .008 .05 .08 ----- Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25. Reduce the above use levels where unacceptable changes to the biological resources will

MANAGEMENT PRESCRIPTION 02A

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS & GUIDELINES

03 Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails in alpine shrub and Krummholz ecosystems. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in other alpine, and other ecosystems, where needed to protect soils, vegetation, or special wildlife habitat.

(0154) (2A)

04 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted.

(0174) (2A)

a. Campsite condition class based upon Frissell, S.S., Journal of Forestry, May, 1978.

(6278) (2A)

05 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites.

(0175) (2A)

06 Facilities provided include development level 1 and 2 campgrounds, trails suitable for motorized trailbike use, local roads with primitive surface and parking lots at trail heads. Provide signing compatible with intended use.

(0153) (2A)

a. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook).

(6226) (2A)

MANAGEMENT PRESCRIPTION 02B

Roaded natural and rural recreation opportunities. Major travel routes. Maintained or improved visual quality. Range management will reduce conflicts between recreation and livestock. Timber harvest.

MANAGEMENT PRESCRIPTION 02B

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS & GUIDELINES

Dispersed
Recreation
Management
(A14 and 15)

01 Provide roaded natural or rural recreation oppor-
tunities along Forest arterial, collector and
local roads which are open to public motorized
travel. Manage recreation use to provide moderate to
high incidence of contact with other groups and
individuals.

Where arterial, collector or local roads or areas
are closed to public motorized recreation travel,
provide for dispersed non-motorized recreation with
a moderate to high incidence of contact with other
groups and individuals in a roaded natural or rural
setting.

(0614) (2B)

a. Maximum use and capacity
levels are:

-Trail and camp encounters during
peak use days may exceed 30 other
parties per day.

-Trail and area-wide use capacity:

ROS Class - Roaded Natural				
Use Level	Very Low	Moder- Low	ate	High
On Trails				
PAOT/mile	-	-	-	-
Area-wide				
PAOT/acre	.04	.08	1.2	2.5

ROS Class - Rural				
Use Level	Low	Very Low	Moder- ate	High
On Trails				
PAOT/mile	-	-	-	-
Area-wide				
PAOT/acre	.5	.8	5.0	7.5

Reduce the above use level co-

efficients as necessary to reflect
usable acres, patterns of use,
and general attractiveness of the
specific management area type as
described in the ROS Users Guide,
Chapter 25.

Reduce the above use levels
where unacceptable changes to
the biophysical resources will
occur.

(6269) (2B)

b. Close local roads to
public use. Designate
routes and areas which
can be periodically open-
ed to:

- Gathering firewood.
- Operating oversnow vehicles.

(6328) (2B)

MANAGEMENT PRESCRIPTION 02B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)	02 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (28)	
	03 Manage site use and occupancy to maintain sites with- in Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (28)	
	04 Facilities provided include development level 1 and 2 campgrounds, trails suitable for motorized trailbike use, local roads with primitive surface and parking lots at trail heads. Provide signing compatible with intended use. (0153) (28)	a. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (28)
		b. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (28)
	05 Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails in alpine shrub and Krummholz ecosystems. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in other alpine, and other ecosystems, where needed to protect soils, vegetation, or special wild- life habitat. (0154) (28)	
	06 Close roads and trails to motorized travel when the surface would be damaged to the degree that resulting runoff into adjacent water bodies would exceed sediment yield threshold limits. (0616) (28)	a. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (28)

MANAGEMENT PRESCRIPTION 03A

Semi-primitive non-motorized recreation opportunities. User density is controlled by access.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS & GUIDELINES

Dispersed
Recreation
Management
(A14 and 15)

01 Emphasize semi-primitive nonmotorized recreation opportunities. Specific land areas or travel routes may be opened seasonally and with specific authorization to accomplish resource management activities. The area is never open for motorized recreation activities except for snowmobiles operating on snow when such use is compatible with the overall recreation and wildlife management objectives.
(0392) (3A)

02 Manage use to allow low to moderate contact with other groups and individuals.
(0238) (3A)

a. Prohibit or restrict motorized vehicle use (R2 FSH 2309.26).
(6228) (3A)

a. Maximum use and capacity:
-Trail and camp encounters during peak use days are less than 30 other parties per day.
-Trail and area-wide use capacity:

ROS Class - Semi-Primitive
Nonmotorized

Use Level	Very Low	Moderate	High
On Trails			
PAOT/ mile	2.0	3.0	9.0 11.0
Area-wide			
PAOT/ acre	.004	.008	.05 .08

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.
(6378) (3A)

MANAGEMENT PRESCRIPTION 03A

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:

Dispersed
Recreation
Management
(A14 and 15)

03 Provide facilities such as foot and horse trails, single lane local intermittent roads with primitive surface used as trails, development level 1 and 2 campgrounds, and necessary signing.

(0394) (3A)

a. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook).

(6226) (3A)

04 Manage site use and occupancy to maintain sites with- in Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites.

(0175) (3A)

MANAGEMENT PRESCRIPTION 04B, 04C, 04D

4B Wildlife habitat management for one or more management indicator species. Livestock grazing will be compatible with wildlife habitat management.

4C Wildlife habitat improvement. Vegetation treatment in hardwood and shrub dominated land. Livestock grazing will be compatible with wildlife habitat management.

4D Wildlife habitat management. Livestock grazing will be compatible with wildlife habitat management. Clearcut aspen only. Slopes less than 40%.

MANAGEMENT PRESCRIPTION 04B, 04C, 04D

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

Dispersed
Recreation
Management
(A14 and 15)

01 Manage human recreational activities so they
do not conflict with habitat needs of selected indicator
species.

(0343) (4B)

02 Semi-primitive nonmotorized, semi primitive motorized,
and roaded natural recreation opportunities can be pro-
vided.

(2031QM) (4B)

a. Maximum Use and Capacity
Levels are:

Recreation use and capacity
range during the snow-free
period (PAOT/acre):

Trail use and capacity range
(PAOT/mile of trail):

Capacity Range

Use Level	Very Low	Moder- ate	High
--------------	-------------	---------------	------

ROS Class - Semi-Primitive
Nonmotorized

On Trails PAOT/mile	2.0	3.0	9.0	11.0
------------------------	-----	-----	-----	------

Area-wide PAOT/acre	.004	.008	.05	.08
------------------------	------	------	-----	-----

ROS Class - Semi-Primitive
Motorized

On Trails PAOT/mile	2.0	3.0	9.0	11.0
------------------------	-----	-----	-----	------

Area-wide PAOT/acre	.004	.008	.05	.08
------------------------	------	------	-----	-----

ROS Class - Roaded Natural

On Trails PAOT/mile	-	-	-	-
------------------------	---	---	---	---

Area-wide PAOT/acre	.04	.08	1.2	2.5
------------------------	-----	-----	-----	-----

MANAGEMENT PRESCRIPTION 04B, 04C, 04D

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:

Dispersed
Recreation
Management
(A14 and 15)

ROS Class - Rural

On Trails

PAOT/mile

Area-wide

PAOT/acre .5 .8 3.0 7.5

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.

(6402) (4B) [not in 04D]

b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88).

(6083) (4B)

c. See FSM 2331, FSM 7732, FSM 7709.12 (Trails Handbook), FSM 7109.11a

and 11b (Sign Handbook).

(6226) (4B)

d. Prohibit open fires when the occurrence of fire rings exceeds Frissell Class 1 site conditions on 10 percent or more of the known campsites.

(6330) (4C) [only in 04C]

03 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted.

(0174) (4B) [not in 04D]

04 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites.

(0175) (4B) [not in 04D]

05 Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails in alpine shrub and Krummholz ecosystems. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in other alpine, and other ecosystems, where needed to protect soils, vegetation, or special wildlife habitat.

MANAGEMENT PRESCRIPTION 05A

Big game winter range in non-forest areas. Travel management prevents unacceptable stress. Livestock grazing managed to favor wildlife habitat.

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS & GUIDELINES

Management of Developed Recreation Sites (AOB, 09, 11 & 13)

01 Design, construct and operate only those developed sites which are needed to meet summer season management objectives, and are appropriate for the established ROS designation. Close all developed sites during the winter management season.
(0652) (5A)

Dispersed Recreation Management (A14 and 15)

01 Manage summer use-season for appropriate ROS opportunities.
Provide roaded natural recreation opportunities within 1/2 mile of Forest arterial, collector and local roads with better than primitive surfaces which are open to public motorized travel.
Provide semi-primitive motorized recreation opportunities with a low to moderate incidence of contact with other groups and individuals within 1/2 mile of designated local roads with primitive surfaces and trails open to motorized recreation use.
Where local roads are closed to public motorized recreation travel, provide for dispersed non-motorized recreation opportunities. Manage recreation use to provide for the incidence of contact with other groups and individuals appropriate for the established ROS class.
Provide semi-primitive non-motorized recreation opportunities in all areas more than 1/2 mile away from roads and trails open to motorized recreation use.
(0654) (5A)

a. Maximum Use and Capacity Levels are:

Recreation use and capacity range during the snow-free period (PAOT/acre):

Trail use and capacity range (PAOT/mile of trail):

Capacity Range

Use Level	Very Low	Low	Moderate	High
ROS class - Primitive				
On Trails PAOT/Mile	0.5	1.0	2.0	3.0

Area wide PAOT/acre	.001	.002	.007	.025
ROS Class - Semi-Primitive Nonmotorized				

On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08

ROS Class - Semi-Primitive Motorized

On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide				

MANAGEMENT PRESCRIPTION 05A

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:

Dispersed
Recreation
Management
(A14 and 15)

ROS Class - Roaded Natural

On Trails

PAOT/mile

Area-wide

PAOT/acre

.04 .08 1.2 2.5

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.
(6404) (5A)

b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88).
(6083) (5A)

c. See FSM 2331, FSM 7732, FSH 7709.12 (Trails

Handbook), FSH 7109.11a, and 11b (Sign Handbook).
(6226) (5A)

d. Prohibit open fires when the occurrence of fire rings exceeds Frissell Class 1 site conditions on 10 percent or more of the known campsites.
(6330) (5A)

a. Close management area to cross-country ski trail development and to snowmobile use.
(6662) (5A)

b. Do not provide parking or trail head facilities during winter.
(6664) (5A)

02 Manage winter use for very low or low densities. Close areas to human use to the degree necessary in winter to prevent disturbance of wildlife.
(0754) (5A)

MANAGEMENT PRESCRIPTION 06B 07A, 07E, 09B

- 6B Livestock grazing. Maintain forage composition. Vegetation treatment in mountain grass, meadow, and shrub; oakbrush; and aspen types. All slopes.
- 7A Intensive timber management. Clearcut harvest in aspen, spruce-fir, and lodgepole pine types. Slopes less than 40%.
- 7E Intensive timber management. Shelterwood harvest in spruce-fir and ponderosa pine types. Clearcut lodgepole pine. Slopes less than 40%.
- 9B Intensive water augmentation. Increase water quantity on suitable timberland. Snowpack management.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
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Dispersed
Recreation
Management
(A14 and 15)

01 Semi-primitive nonmotorized, semi-primitive motorized, roaded natural and rural recreation opportunities can be provided.
(0445) (6B)

02 Provide roaded natural recreation opportunities within 1/2 mile of Forest arterial, collector and local roads with better than primitive surfaces which are open to public travel.

Provide semi-primitive motorized recreation opportunities with a low to moderate incidence of contact with other groups and individuals within 1/2 mile of designated local roads with primitive surfaces and trails open to motorized recreation use.

Where local roads are closed to public motorized recreation travel, provide for dispersed non-motorized recreation opportunities. Manage recreation use to provide for the incidence of contact with other groups and individuals appropriate for the established ROS class.

Provide semi-primitive non-motorized recreation opportunities in all areas more than 1/2 mile away from roads and trails open to motorized recreation use.
(0650) (6B)

a. Maximum Use and Capacity Levels are:

Recreation use and capacity range during the snow-free period (PAOT/acre):

Trail use and capacity range (PAOT/mile of trail):

Capacity Range

Use Level	Very Low	Low	Moderate	High
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ROS Class - Semi-Primitive Nonmotorized

On Trails	PAOT/mile	2.0	3.0	9.0	11.0
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Area-wide	PAOT/acre	004	008	05	08
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MANAGEMENT PRESCRIPTION 06B , 07A, 07E, 09B

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:

Dispersed
Recreation
Management
(A14 and 15)

Motorized

On Trails				
PAOT/mile	2.0	3.0	9.0	11.0
Area-wide				
PAOT/acre	.004	.008	.05	.08

ROS Class - Roaded Natural

On Trails				
PAOT/mile	-	-	-	-
Area-wide				
PAOT/acre	.04	.08	1.2	2.5

ROS Class - Rural

On Trails				
PAOT/mile	-	-	-	-
Area-wide				
PAOT/acre	.5	.8	5.0	7.5

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.
(6402) (6B)

b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88)
(6083) (6B)

c. See FSM 2331, FSM 7732, FSH 7709.12 (Trails

MANAGEMENT PRESCRIPTION 06B, 07A, 07E, 09B

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:

Dispersed
Recreation
Management
(A14 and 15)

Handbook), FSH 7109.11a
and 11b (Sign Handbook).
(6226) (6B)

03 Permit undesignated sites in Frissell condition class 1
through 3 where unrestricted camping is permitted.
(0174) (6B)

04 Manage site use and occupancy to maintain sites with-
in Frissell condition class 3 except for designated
sites which may be class 4. Close and restore class 3
sites.
(0175) (6B)

05 Prohibit motorized vehicle use (including snowmobiles)
off Forest System roads and trails in alpine shrub
and Krummholz ecosystems. Prohibit motorized vehicle
use off Forest System roads and trails (except snowmobiles
operating on snow) in other alpine, and other ecosystems,
where needed to protect soils, vegetation, or special wild-
life habitat.
(0154) (6B)

APPENDIX F
MANAGEMENT AREA-
RECREATION OPPORTUNITY SPECTRUM MATRIX

Management Area	Emphasis	ROS Class					
		P	SP NM	SPM	RN	R	U
1A	National Forest System Developed Recreation Sites.						
1B	Existing winter sports sites.						
1D	Utility corridors and electronic sites.						
2A	Semi-primitive motorized recreation opportunities. Range management will reduce conflicts between recreation and livestock.			X			
2B	Roaded natural and rural recreation opportunities. Major travel routes. Maintained or improved visual quality. Range management will reduce conflicts between recreation and livestock. Timber harvest.				X	X	
3A	Semi-primitive non-motorized recreation opportunities. User density is controlled by access.		X				
4B	Wildlife habitat management for one or more management indicator species. Livestock grazing will be compatible with wildlife habitat management.		X	X	X		
4C	Wildlife habitat improvement. Vegetation treatment in hardwood and shrub dominated land. Livestock grazing will be compatible with wildlife habitat management.		X	X	X		
4D	Wildlife habitat management. Livestock grazing will be compatible with wildlife habitat management. Clearcut aspen only. Slopes less than 40%.		X	X	X		
5A	Big game winter range in non-forest areas. Travel management prevents unacceptable stress. Livestock grazing managed to favor wildlife habitat.		S	S	S		
5B	Big game winter range in forest areas. Travel management prevents unacceptable stress. Vegetation treatment will enhance plant and animal diversity. Livestock grazing managed to favor wildlife habitat.		S	S	S		

Management Area	Emphasis	ROS Class					
		P	SP NM	SPM	RN	R	U
6A	Livestock grazing. Improve forage composition. Vegetation treatment in mountain grass, meadow, and shrub; oakbrush; and aspen types. All slopes.		x	x	x	x	
6B	Livestock grazing. Maintain forage composition. Vegetation treatment in mountain grass, meadow, and shrub; oakbrush; and aspen types. All slopes.		x	x	x	x	
7A	Intensive timber management. Clearcut harvest in aspen, spruce-fir, and lodgepole pine types. Slopes less than 40%.		x	x	x	x	
7C	Intensive timber management. Clearcut harvest in lodgepole pine type. Group selection harvest in spruce-fir type. Slopes greater than 40%.		x	x	x	x	
7E	Intensive timber management. Shelterwood harvest in spruce-fir and ponderosa pine types. Clearcut lodgepole pine. Slopes less than 40%.		x	x	x	x	
8A	Pristine wilderness setting. Very high levels of solitude. High opportunity for challenge, risk, and self-reliance. No trails present.	x					
8B	Primitive wilderness setting. High level of solitude. High opportunity for challenge, risk, and self-reliance.	x					
8C	Semi-primitive wilderness setting. Moderate level of solitude. Moderate opportunity for challenge, risk, and self-reliance.		x				
9A	Riparian area management. One hundred feet of perennial stream edges. Does not apply to wildernesses, special interest areas, and research natural areas.		x	x	x	x	
9B	Intensive water augmentation. Increase water quantity on suitable timberland. Snowpack management.		x	x	x	x	
10A	Research Natural Areas.						
10C	Special Interest Areas. Cultural Areas. National Natural Landmarks.		x	x	x		
10E	Municipal Watersheds.						

APPENDIX G
MANAGEMENT AREA-
TRANSPORTATION DIRECTION SUMMARY

Management Area	Emphasis	Transportation Direction
1A	National Forest System Developed Recreation Sites.	1A & 1D do not have any transportation or ROS direction.
1B	Existing winter sports sites.	1B allows roads for Management of tree stands (No ROS)
1D	Utility corridors and electronic sites.	See 1A above
2A	Semi-primitive motorized recreation opportunities. Range management will reduce conflicts between recreation and livestock.	2A allows for roads not to exceed Design Guides. (ROS class is SPM)
2B	Roaded natural and rural recreation opportunities. Major travel routes. Maintained or improved visual quality. Range management will reduce conflicts between recreation and livestock. Timber harvest.	2B gives direction to manage roads & allows for road closures etc. (ROS class include RN & R)
3A	Semi-primitive non-motorized recreation opportunities. User density is controlled by access.	3A allows roads for non-Recreation purposes. Closing areas to off road vehicles. (ROS class is SPNM).
4B	Wildlife habitat management for one or more management indicator species. Livestock grazing will be compatible with wildlife habitat management.	4B, 4C, & 4D have the same transportation direction. 1. Road & area closures as needed for indicator species 2. Determine off-road
4C	Wildlife habitat improvement. Vegetation treatment in hardwood and shrub dominated land. Livestock grazing will be compatible with wildlife habitat management.	vehicle restrictions based on wildlife. 3. In 4C locate & construct roads to maintain the natural condition. (Range of ROS classes include: SPNM, SPM & RN)
4D	Wildlife habitat management. Livestock grazing will be compatible with wildlife habitat management. Clearcut aspen only. Slopes less than 40%.	
5A	Big game winter range in non-forest areas. Travel management prevents unacceptable stress. Livestock grazing managed to favor wildlife habitat.	5A & 5B have the same transportation direction. 1. Road design & traffic is not to block big game movement 2. New roads will only be built for priority goals outside management area. Roads will be minimum standard.
5B	Big game winter range in forest areas. Travel management prevents unacceptable stress. Vegetation treatment will enhance plant and animal diversity. Livestock grazing managed to favor wildlife habitat.	3. Close roads & prohibit vehicle use to prevent stress on big game. (ROS classes: SPNM, SPM, & RN)

Management Area	Emphasis	Transportation Director
6A	Livestock grazing. Improve forage composition. Vegetation treatment in mountain grass, meadow, and shrub; oakbrush; and aspen types. All slopes.	6A & 6B Do not have any transportation direction. (Range of ROS classes include: SPNM, SPM, RN & R).
6B	Livestock grazing. Maintain forage composition. Vegetation treatment in mountain grass, meadow, and shrub; oakbrush; and aspen types. All slopes.	
7A	Intensive timber management. Clearcut harvest in aspen, spruce-fir, and lodgepole pine types. Slopes less than 40%.	7A, 7C & 7E have the same transportation direction. Locate, survey & design road for timber management. (Range of ROS classes include: SPNM, SPM, RN & R.).
7C	Intensive timber management. Clearcut harvest in lodgepole pine type. Group selection harvest in spruce-fir type. Slopes greater than 40%.	
7E	Intensive timber management. Shelterwood harvest in spruce-fir and ponderosa pine types. Clearcut lodgepole pine. Slopes less than 40%.	
8A	Pristine wilderness setting. Very high levels of solitude. High opportunity for challenge, risk, and self-reliance. No trails present.	8A does not have any transportation direction. (ROS class is P - Pristine, Primitive).
8B	Primitive wilderness setting. High level of solitude. High opportunity for challenge, risk, and self-reliance.	8B & 8C allow for roads for authorized activities. Trails are managed for Wilderness transportation objectives. Also includes direction on bridge & signs. (ROS class for 8B is P & for 8C is SPNM).
8C	Semi-primitive wilderness setting. Moderate level of solitude. Moderate opportunity for challenge, risk, and self-reliance.	
9A	Riparian area management. One hundred feet of perennial stream edges. Does not apply to wildernesses, special interest areas, and research natural areas.	9A transportation direction include: 1. Locate roads & trails outside riparian areas. 2. Create artificial sediment traps where needed 3. no disturbance to riparian areas. (ROS classes include: SPNM, SPM, RN & R). 8B has the same transportation direction as 9A. (ROS classes include: SPNM, SPM, RN, & R).
9B	Intensive water augmentation. Increase water quantity on suitable timberland. Snowpack management.	
10A	Research Natural Areas.	10A generally prohibits roads. (ROS direction).
10C	Special Interest Areas. Cultural Areas. National Natural Landmarks.	10C & 10E Do not have any transportation direction. 10C ROS classes include: SP, SPM, & RN. 10E has No ROS.
10E	Municipal Watersheds.	

APPENDIX H

Forest Plan Recreation Opportunity Spectrum Implementation Direction

FUNCTION: Recreation

All Prescriptions

Problem:

- I. Conflicts exist between the ROS inventory, Forest Plan Prescriptions, Forest Plan model base, and Regional Guides.

Proposed
Solution:

II. Goals:

- A. Resolve conflicts between Prescription 2A and the ROS inventory. Two situations exist. 1) Prescription 2A manages areas for SPM and the ROS inventory identifies the area as RN. Examples: Gunnison N.F. - Pitkin/Tincup Area, Spring Creek Resort Area, Cement Creek Area, Gothic Area, Lake City Area, and Spring Creek/La Garita Area; Uncompahgre N.F. - Silver Jack Area. 2) Prescription 2A manages areas for SPM and the ROS inventory identifies the area as SPNM. Examples: Gunnison N.F. - Maroon Bell/ Snowmass Area, Long Branch Area and West Baldy Area.
- B. Resolve conflicts between Prescription 2B and the ROS inventory. Prescription 2B manages area for RN and R while the ROS inventory identifies the area as SPM. Examples: Gunnison N.F. - Lake Irwin Area and Kebler Pass Area; Uncompahgre N.F. - Imogene Pass Area.
- C. Resolve conflicts between Prescription 3A and the ROS inventory. Prescription 3A manages areas for SPNM and the ROS inventory identifies the area as SPM or RN. Prescription 3A management areas are generally accurate, however conflicts occur along their boundaries. Examples: Uncompahgre N.F. - Ouray Area and Lake City Area.
- D. Reduce or minimize loss of ROS Class at the primeval end of the Spectrum. Prescriptions are applied to allow for some SPNM, however the remaining SPNM are too small for SPNM classification. Examples: Gunnison N.F. - Long Branch Area, West Baldy Area, Taylor Park Area, and Crested Butte Area.

II. Objectives:

Maintain the current ratio (+10%) of SPNM and SPM ROS class acreage on Forest.

III. Action Plan/Solution Statement and Desired Results.

A. Review ROS Inventory Maps for Accuracy.

1. District Recreation Staff make review.
2. District Ranger approve changes.
3. Will require 2 - 3 days time.

B. Update ROS Inventory Maps for Accuracy.

1. Supervisor's Office Recreation Staff to prepare updated map with acreages identified.
2. Will require approximately 1 week.

C. Review ROS Inventory Maps/Prescription Conflict Areas and Choose Course of Action.

1. ROS Inventory Map - RN/Prescription 2A - SPM.

- a) Revise Prescription Map applying Prescription 2B into RN/2A conflict areas using the Forest Plan Amendment Process.
- b) Manage the RN/2A conflict areas for ROS Class RN as shown on ROS inventory maps.

2. ROS Inventory Maps - SPNM/Prescription 2A - SPM.

- a) These areas are bisected by prescriptions and are too small for SPNM classification.
- b) Manage the 3 areas as directed by Prescription 2A (SPM).

3. ROS Inventory Maps - SPM/Prescription 2B - RN and R.

- a) Revise Prescription Map applying Prescription 2A into SPM/2B conflict areas using the Forest Plan Amendment Process.
- b) Manage the SPM/2B conflict areas for ROS Class SPM as shown on ROS inventory maps.

4. ROS Inventory Maps - SPM and RN/Prescription 3A - SPNM.

- a) Recognize that Prescription 3A emphasizes SPNM and as such allows for some minor amounts of other ROS classes.
- b) Manage the SPM and RN/3A conflict areas for the ROS classes as shown on the ROS inventory maps.

5. Prescriptions 4B, 4C, 4D, 5A, 5B, 6A, 6B, 7A, 7C, 7E, 9A, 9B, and 10C allow for a number of different ROS classes/ROS inventory maps are specific and may conflict.
 - a) Manage these conflict areas for the ROS classes as shown on the ROS inventory maps.
 6. Prescriptions 1A, 1B, 1D, 10A, and 10E do not identify a specific ROS class/possible confusion as to what ROS should be managed.
 - a) Manage these areas for the ROS classes as shown on the ROS inventory maps.
- D. Review ROS Inventory Maps/Transportation Plan.
1. ROS Inventory map - SPNM/Travel Plan map allows for motorized use and roads or trails exist in areas. Example: Uncompahgre N.F. - Plateau Aspen Treatment Area.
 - a) All SPNM on Plateau needs District review.
 - b) Update ROS inventory maps.
 - c) Include as part of Action Plan items III A and B.
- E. Project Environmental Analysis Reports need to assess possible changes in ROS classes on a project-by-project basis.
1. Display current inventoried ROS setting, use and activity which occurs within and adjacent to project.
 2. Discuss consequences and effects on inventoried ROS setting, use and activities due to a project.
 3. If SPNM, or SPM is involved develop mitigating measures to retain these opportunities in at least one project alternative.
- F. Monitor Forest situation to maintain ROS inventory map ratio (+10%) of SPNM, and SPM ROS Class acres on Forest at 1980 level.
1. Supervisor's Office Recreation Staff to maintain a Forest ROS inventory map overlay showing project ROS class changes.
 2. Supervisor's Office Recreation Staff to keep a cumulative record noting ROS class ratio as changes occur from projects.
 3. Supervisor's Office Recreation Staff to summarize project changes and ROS class ratio by April 1 annually.

IV. Guidelines

The following guidelines apply for determining what ROS Class will be used in managing an area.

1. Manage areas under Prescriptions 1A, 1B, 1D, 3A, 4B, 4C, 4D, 5A, 5B, 6A, 6B, 7A, 7C, 7E, 9A, 9B, 10A, 10C, and 10E as shown on ROS inventory maps, except where project EA's have been made which approve an ROS class change. In these areas manage for the ROS class change specified in the EA.
2. Manage areas under Prescription 2A as shown on ROS inventory maps, except where SPNM areas have become too small for SPNM classification or where project EA's have been made which approve an ROS class change. Manage SPNM areas that have become too small as SPM. Manage areas with EA changes in ROS class for the change specified in the EA.
3. Manage areas under Prescription 2B in the Lake Irwin, Kebler Pass and Imogene Pass Areas as SPM.

APPENDIX I

Travel Management Criteria

I. Area

A. Step 1 - Preliminary Area Designation

1. Color code district by Rx (do lightly to allow changes)
See attached Management Area Summary for prescription description.
 - a. Red - Areas closed yearlong to motorized vehicles on and off Forest roads and trails
Rx's to be coded red - Rx 8A, 8B, 8C, 8D, 10A, 10C
 - b. Yellow - Areas closed yearlong to motorized vehicles except on designated routes and snowmobiles operating on snow. (May have restrictions)
Rx's to be coded yellow - Rx 1B, 1D, 3A, 4C, 4D
 - c. Green - Areas open yearlong to motorized travel on and off roads and trails (May have special restrictions and closed roads) Do not color in green area at this point.
Rx's to be coded green - Rx 1A, 2A, 2B, 4B, 6A, 6B, 6C, 6D, 7A, 7C, 7E, 7F, 9B

B. Step 2 - Confirming Area Designation

1. Color Coding
 - a. Red - No change, firm
 - b. Yellow - Usually no change, look for special situations and record justification for change. Compare with existing travel map and consider difficulty of enforcement of isolated spots.
 - c. Green - Rx's 2A, 2B, 4B should be colored green unless special situation - Record justification for change. Compare with existing travel map.

Rx's 6A, 6B, 6C, 6D, 7A, 7C, 7E, 7F are range and timber prescriptions. These areas may be placed in restricted area (yellow) designation for significant resource values such as wildlife or resource damage. Record justifications for change. Roads may be closed in green areas. The closed roads will not be shown on the guide.
 - d. Rx 1A - The map legend for campground symbol will indicate that travel is restricted to designated roads.
2. Use current Travel Map to identify major changes or to prevent overlooking special situations.
3. Color code final choices to use as area travel management. All areas not red or yellow will be green.

II. Roads

A. Step 3 - Road Management Designation

Reference attached Maintenance Inventory.

Assume "Required (Ideal) Maintenance Level" decisions are correct. Those listed for Levels III, IV, & V will thus remain the same and be open (Generally arterials, collectors, and local campground roads). Those listed as Level I or II will be reviewed for reduction to Level I and closures. Closures for lack of maintenance funds will be considered at a later date after analyzing the initial recommendations.

1. All roads in Level III, IV, V will be open with no limitations other than wet weather or seasonal closures. Don't need to code unless seasonal closures. These roads do not need further consideration at this time. Also, roads maintained by the counties at maintenance Level II need not be considered at this time. Remove from these lists by lining out.
2. Review remaining roads listed in Level I or II. Find on map and look at area designation.
3. Use Area Map developed in Step 2 for following process:
 - a. Red Area - No roads shown on Travel Map - Close existing roads with high discouragement at boundary or beginning of road.
 - b. Yellow Area - Roads may be open in yellow area, however, most local roads should be closed or have limitations except for the following:
 1. Road to private land (May still be Level I with limitations)
 2. Roads with multiple use need such as access to reservoirs, lodges, etc.

Criteria for closure (Definition of Closed; Road signed and Travel order issued):

1. Disturbance to wildlife occurring.
2. Resource damage occurring due to erosion, rutting, sedimentation.
3. Unsafe for 4-wheel drive.
4. Newly constructed access for single resource (i.e., local timber roads)

Criteria for limitations: (Definition: Open, but signed for conditions of use.) (Limitations may be placed on maintenance Level I or II roads.)

1. No resource or road damage (thus Maintenance Level I acceptable)
2. Reduce maintenance costs.
3. Serves no purpose or resource, but closure would be difficult (i.e. in an open park).

Some collectors may be closed or have limitations using the criteria above.

Four-wheel drive recreation roads (see attached list - Attachment G) should remain open and maintained at Level II (special - 4WD). Make special notation on Maintenance Inventory, as a reminder to properly code.

- c. Green Area - Same as for yellow area with following exceptions: Where Rx's 2A, 2B, 4B are applied:

1. Look for existing or potential 4-wheel drive routes (see attached 4WD criteria - Attachment E)
2. Consider seasonal closures where resource damage is a concern.
3. Rx's emphasize semi-primitive motorized. Roads should remain open.

Use Attachment B - Roads code sheet and key

- d. Record under column marked road status RS (Column 5) one of the following codes:

Code = Description

O = Open
L = Limitation
C = Closed

- e. Record under column marked limitation sign (LS) (Column 6) one of the following codes (Where L coded above): (see Maintenance Inventory, column "Type of Road") (Correct Inventory if wrong.)

Code = Description

H = High Clearance Vehicles, Not Maintained for passenger cars.
F = Four Wheel Drive Recreation Symbol, Not maintained for passenger cars.
R = Road Not Maintained for Public Travel.
S = Seasonal closure sign (Sign 4g in Attachment F)

- f. Record under column marked Discouragement Level (DL) (Column 7) one of the following coded (Where C coded above):

Code = Description

MIN = Minimum Discouragement
MOD = Moderate Discouragement
HIG = High Discouragement

Minimum Discouragement = Carsonite post with sign in the middle of the road, or white arrow where many non-system roads (i.e. wheel tracks)

Use where resource damage small and violations are light.

Moderate Discouragement = Use Carsonite post with sign plus physical restraints such as large boulders.

Use where resource damage and violations are unacceptable, and location makes physical closures effective.

High Discouragement = Use where resource damage and violations are unacceptable and physical closures are not effective.

- g. Record under column marked - Closure Sign (CS) (Column 8) one of the following codes: (See attached R2 Standard Travel Management Signing)

- a. If MIN or MOD coded above:

WA = White Arrow
or in conjunction with a "No Motorized Vehicles" on a Carsonite post;

A = To avoid disturbance to wildlife
B = To prevent damage to the road during spring runoff
C = Permanent Road closure
D = Unsafe Conditions
E = To prevent erosion of fragile alpine soils
F = Temporary Road Closure
G = This road will be closed to motor vehicles from
to
H = Closed due to the lack of maintenance funds
I = Snowmobiles Excepted
J = To prevent Damage to the Road
K = To Protect Soil and Water Resources
L = Except Trail Vehicles and Snowmobiles
M = This Road Will Be Closed to Motorized Use
Starting
P = No Right-of-Way Across Private Lands

Many use 2 codes. Example: BF or BG for a seasonal closure.

- b. If HIG coded above:

Use same codes for signs in part (a), although signs will be 11" X 15" "No Motor Vehicles" for placement on closure device rather than on carsonite post.

- h. Record under column marked Traffic Control Device (TCD) (Column 9) one of the following codes for roads being closed: (See section 24 in draft HB for detailed description)

A = Temporary/Movable Barriers
B1 = Pipe closure gate
B2 = Powder River closure gate
B3 = MUTCD Type III Barricade
B4 = Hazard Marker on Carsonite Post
WA = White Arrow sign
C1 = Physical closure (Earth Barrier, Rock Barrier)
C2 = Physical closure, fence
C3 = Physical closure, rip and seed segment

- i. Record under column marked Maintenance Level (ML) (Column 4) one of the following codes:

1 = Maintenance Level 1 - Road closed or open with condition of use signed on ground.
2 = Maintenance Level 2 - Road open or with limitations.
2S = Maintenance Level 2 - Special for 4WD Recreation Roads on list. Road signed as 4WD.

B. Step 4 - Map Roads on Travel Management Guide

1. Roads closed will not be shown.
2. Show remainder according to Travel Guide Legend attached. See Limitation Sign (Column 6) for further assistance. Also note maintenance inventory under column "Type of Road".

Use red color for roads.

3. Road outside Forest Boundary - show only those with known County, BLM, or other public agency R/W. In particular, do not show access that historically has been limited by private land owners.
4. Show roads with seasonal closures with appropriate symbols.

III. Trails

A. Levels of Maintenance

1. Level I (MIH 763 - Level I)

- a. Remove man-made safety hazards. (Near failure slope protection - rotten log).
- b. Inform users via travel maps and/or signing at trail head of maintenance level.
- c. Remove dead fall or slides causing unacceptable damage to soil and water resource.
- d. Very little signing or marking (route number at junctions).
- e. Suggest a 3-year schedule or maintenance and condition inventory.
- f. May have natural hazards affecting all users.

2. Level II (MIH 764 - Level II)

- a. Remove safety hazards which may cause injury.
- b. Inform users via travel maps and/or signing at trail heads of maintenance level.
- c. Remove dead fall or slides causing unacceptable resource damage.
- d. Limited signing and marking (route numbers at junctions and blazing in areas where users may become confused).
- e. Suggest a two-year schedule on maintenance and condition inventory.
- f. User comfort not emphasized.
- g. May have some natural hazard affecting horse and bike use. Stream crossing may be hazardous for all users.
- h. Emphasize investment protection.

3. Level III (MIH 765 - Level 3)

- a. Remove safety hazards.
- b. Inform users of level of maintenance via travel maps and/or signing at trail head.
- c. Remove dead fall and debris and repair tread.
- d. Ample signing and markings.
- e. Suggest a yearly schedule on maintenance and condition inventory.
- f. User comfort emphasized.
- g. Some stream crossing during higher water may be hazardous for users.
- h. Investment well protected.

4. Level IV (MIH 766 - Level 4 or MIH 767 - Level 5)

- a. Remove safety hazards.
- b. Inform users of level of maintenance via travel maps and/or signing at trail head.
- c. Remove dead fall and debris and repair tread.
- d. Well signed and marked.
- e. May be twice a year maintenance with annual condition inventory.
- f. User comfort is major consideration.

B. Maintenance Level Criteria

1. Wilderness

a. Level I Trail Maintenance

1. 8A Prescription FLMP.
2. 8B Prescription FLMP.
3. Low level of use desired (6 or less parties per day).

b. Level II Trail Maintenance

1. 8B Prescription FLMP.
2. 8C Prescription FLMP.
3. Low to moderate level of use desired (6-20 parties per day).

c. Level III Trail Maintenance

1. 8C Prescription FLMP.
2. 8D Prescription FLMP.
3. Moderate to high level of use desired (20 or more parties per day).

d. Level IV Trail Maintenance

1. Not expected in wilderness areas.

2. Undeveloped Area

a. Level I Trail Maintenance

1. Expected and/or desired low level of use for the trail and/or area (6 or less parties per day).
2. Low potential for resource damage.

b. Level II Trail Maintenance

1. Expected and/or desired low to moderate level of use for the trail or area (6-20 parties per day).
2. Low potential for resource damage.

c. Level III Trail Maintenance

1. Expected and/or desired moderate to heavy use for the trail or area (20 or more parties per day).
2. Moderate potential for resource damage.

d. Level IV Trail Maintenance

1. Expected and/or desired very high level of use for the trail or area.
2. Special emphasis trails (handicapped, interpretive, etc.)
3. High potential for resource damage.

C. Criteria for Closure of Trails to Motorized Vehicles

1. Designated Wilderness Areas
8A-D Prescription FLMP.
2. Special Interest Areas (Gothic)
10A and 10C Prescription FLMP.
3. Possible 3A, 4C and 4D Prescription FLMP.
4. Resource Damage or Conflicts
 - a. Critical Wildlife Areas
 - b. Soil and Water Damage
 - c. Adjacent Management Prescription
 - d. Vegetation Damage
5. Safety

D. Criteria for Closing Trails to Foot or Saddle and Pack Animals

1. Safety Hazard to type of user.
2. Unacceptable resource damage.

E. Step 5 - Trail Management Designation

See Attachment C - Trails Code Sheet and accompanying Code Sheet Key.

F. Step 6 - Map Trails on Travel Management Guide

1. Use blue color for trails.
2. Use Travel Guide legend attached.
3. Place X's on those trails coded closed in column 4 of code sheet. (We still have to determine how to show on travel guide which restriction indicated in column 4 applies.

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